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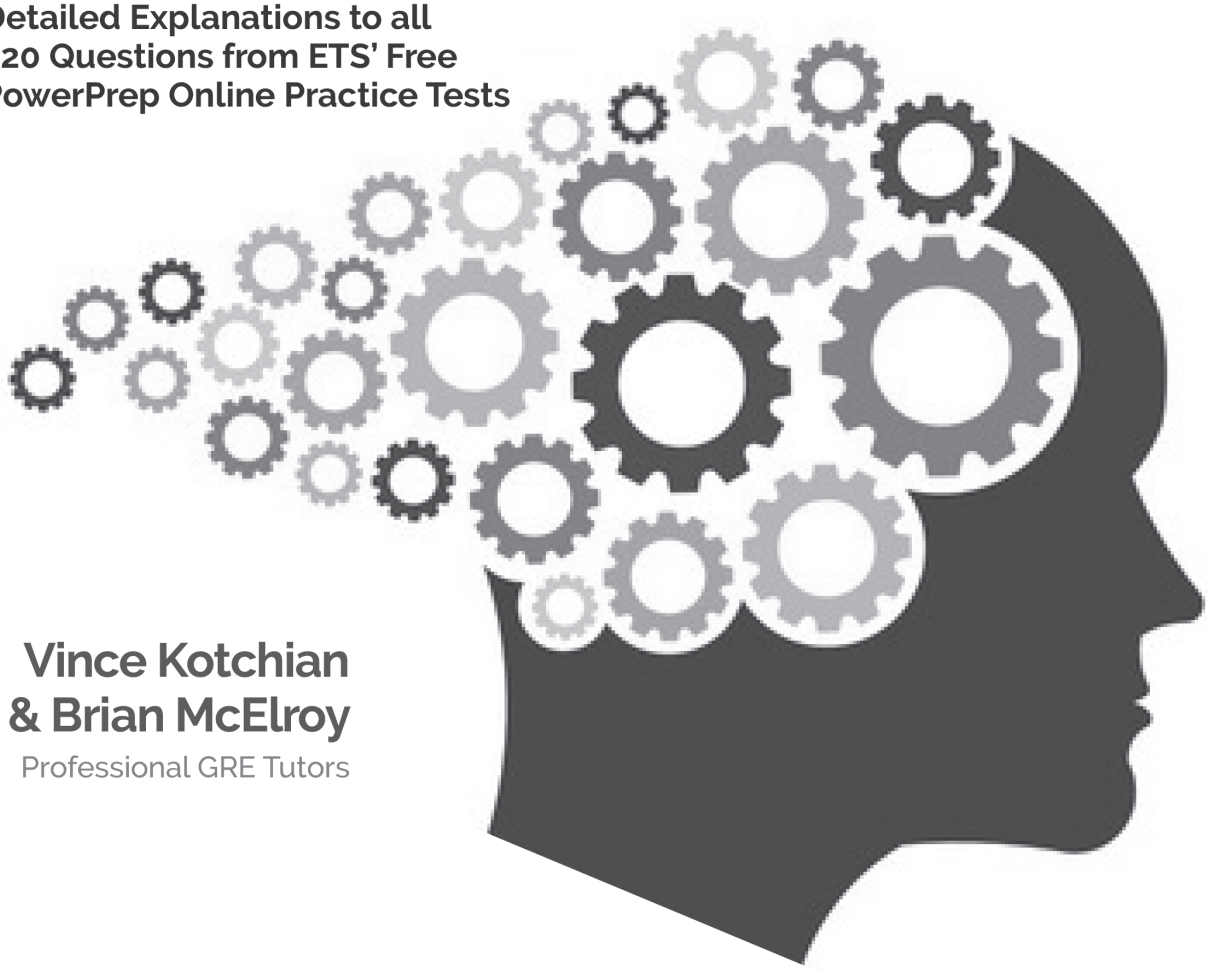
GRE PowerPrep Explanations

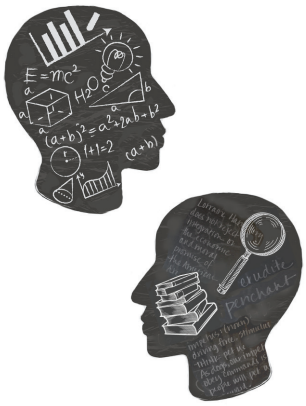
- Real GRE questions
- Builds critical thinking, reading, vocabulary, and mathematics skills
- Clear, concise, direct, and simple advice
- Handwritten math solutions and full analyses of every answer choice

Detailed Explanations to all 320 Questions from ETS' Free PowerPrep Online Practice Tests



Vince Kotchian & Brian McElroy

Professional GRE Tutors



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You can find the Free GRE Powerprep software at https://www.ets.org/gre/revised_general/prepare/powerprep2

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Who are we? We are professional GRE tutors based in San Diego, California. Combined, we have over 25 years experience teaching and tutoring students for this exam.

Why did we write this guide? We wrote this guide because, like most experienced GRE tutors, we believe in using real GRE questions whenever possible. However, although ETS (the maker of the GRE) provides two free computer-based practice GREs, it does not provide any answer explanations for the PowerPrep CAT (computer adaptive test) questions! Even the answer explanations that ETS does provide in the Official Guides are often noticeably lacking and/or difficult to comprehend for the average student.

The explanations within this book are meant not only to make the answers clear, but also to help you build (slowly, and over time) the type of critical thinking, reading, vocabulary and mathematics skills that you will need to succeed on the GRE. In our explanations, we aim to be **clear**, **concise**, **direct**, and **simple**, and we always welcome suggestions for improvements.

Please also read Brian's detailed ***Guide to Navigating the GRE Powerprep Online Practice Tests***.

Good luck with your GRE prep, and please contact us with any comments or questions!

— Vince Kotchian and Brian McElroy, professional GRE tutors, San Diego CA

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Introduction

When preparing for the GRE, one must remember to use official materials (materials written by ETS, the maker of the GRE) whenever possible. Third-party strategy and learning guides certainly have a place in the GRE prep process, but far too many students waste their GRE preparation time by using non-official test questions from companies such as Kaplan, which are often far different than the real thing--particularly with regard to GRE Verbal Questions, where it is difficult, if not impossible, for 3rd-party questions to fully replicate the wording, tendencies, and "feel" of official ETS questions.

Here are all of the **GRE official materials from ETS** currently available:

1) **PowerPrep Online (Free):** 2 free computer-adaptive tests (CATs) containing 160 real GRE questions per test (320 total), along with a Test Preview Tool (18 additional questions and 2 more essay questions). ***Note: The PowerPrep Online GRE tests include the exact same 320 questions as the questions from this book.***
2) **Powerprep Plus Online** ($40 per test with 90 days of access): 2 more CATs ($40 each with 90 days of access) that you can only take once per purchase. 80 real GRE questions per test, and 320 real GRE questions total, along with a Test Preview Tool (18 additional questions and 2 more essay questions).
3) **Paper-Based GRE Practice Test** (old version): Beware: only 22 questions on the old paper-based test are unique: the other 78 questions overlap with the free PowerPrep Online test #1. Do not take these paper-based tests until after you take the PowerPrep online tests, or your diagnostic scores on the CATs might be less realistic due to question repetition.
4) **Paper-Based GRE Practice Test** (new version): Beware: only 37 questions on the old paper-based test are unique: the other 53 questions overlap with the free PowerPrep Online test #2. Do not take these paper-based tests until after you take the PowerPrep online tests, or your diagnostic score might be less realistic due to question repetition.
5) **The Official Guide to the GRE General Test, 3rd Edition**: 296 real GRE practice questions, including 57 additional math exercises.
6) **Official GRE Quantitative Reasoning Practice Questions, Second Edition, Volume 1**: 150 additional GRE Quant practice problems, along with answer explanations / test info.
7) **Official GRE Verbal Reasoning Practice Questions, Second Edition, Volume 1**: 150 GRE Verbal practice problems, along with answer explanations and information on the test.

8) **The Official GRE Super Power Pack** (includes books #5, 6 and 7 in one bundle, sometimes at a lower price than the individual books).
9) **The Official GRE Value Combo** (includes books #6 and 7 in one bundle, sometimes at a lower price than the individual books).

If you add up all the unique questions in these official resources, it totals about 1,300 official questions, which for many students is more than sufficient for a full GRE preparation. However, many students need more learning, strategy and practice than the official materials can provide. With that in mind, here are some additional 3rd-party GRE strategy and learning guides that we can recommend:

1) **Manhattan Prep 5-Lb Book of GRE Practice Problems**
2) **Manhattan Prep GRE Set of 8 Strategy Guides**
3) **GRE Prep by Magoosh**
4) **Barron's GRE, 22nd Edition**
5) **McGraw-Hill Education GRE 2018**
6) **Cliff's Notes Math Review for Standardized Tests, 3rd Edition**
7) **GRE Vocab Capacity *(disclaimer: also written by us)***

You might also want to consider purchasing the Manhattan Prep GRE CATs, which do not include real GRE questions, but are still (mostly) realistic and make for good practice if you need more than four CATs. The first exam is free, and you can buy six more for $39.

We do NOT recommend Kaplan or Princeton Review books, which are decent for mid-level scorers, but too simplistic for the student who aspires to high GRE scores.

GRE Study Plan

How to Study for the GRE

There is no one "right way" to study for the GRE. Some students prefer to jump in head-first and take a diagnostic practice test right away. Others are much more cautious, wanting to learn the topics well before taking an exam under test-day conditions.

In general, we would make a few suggestions:

1) **Study frequently and for short durations.** We suggest studying three times a day for 50 minutes each, or two times a day for 75 minutes each. Spend most of your time trying practice problems (active), not just reading or watching videos (passive). If possible, check the correct answer / answer explanation to each question right away for optimum learning — learning is best done when your thoughts are still fresh.

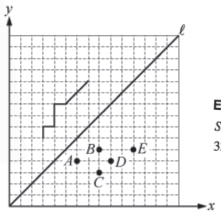
2) **When you get something wrong, it's a precious opportunity to improve.** Don't rush it! Avoid the temptation to just check the correct answer, and move on. Instead, force yourself to evaluate all the answer choices, and to try the questions again from scratch, as many times as needed, until you've mastered them. Check the correct answer only after you've tried the question again. Repeat this process as many times as possible until you've mastered the material.
3) **Don't take too many full practice tests, and don't always practice with time pressure** — you need to learn how to crawl before you can learn how to walk.
4) **Try to use real GRE questions whenever possible, but be willing to use 3rd-party materials if you need extra practice in a specific area.**
5) **On Quant, be willing to go back to the basics if necessary, by drilling certain math concepts over and over until you are more confident.** The Cliff's Notes Math Review for Standardized Tests book is helpful in this regard. Many math questions on the GRE quant section can be solved easily through a strong grasp of math theory and number properties.
6) **Improve your vocabulary.** Vocab is very important on the Verbal section of the GRE. In addition to this book, you may have heard (also mentioned above) that we have co-written a popular GRE Vocab Book, GRE Vocab Capacity.
7) **Don't give up.** Most people have to take the GRE several times before they reach their desired score, and the GRE ScoreSelect policy allows test-takers to hide any GRE scores that they don't want their potential grad programs to see.
8) **If you're taking periodic full GRE practice tests as part of your practice regimen, then good job!** But don't bother trying to review your results afterward. Instead, wait until the next day, when your mind is fresher, to review your results. Remember, it's the careful, deliberate and untimed review of each question you got wrong that leads to actual improvement, not just the act of taking the practice test itself. Force yourself to retry each question, even if the correct answer "already makes sense"...especially on Quant. For Verbal, focus on writing down **why all the wrong answers are wrong,** not just why the right answer is right.

Vince and Brian's GRE PowerPrep 2 Explanations TEST 1

Easy Explanations for Mere Mortals

#12 $\frac{1}{2^{10}} = \frac{1}{4^5} = \frac{1}{4 \cdot 4 \cdot 4 \cdot 4 \cdot 4}$ = USE CALC.

$\frac{1}{1,024} = .00097 < .001$? yes. thus, [A]

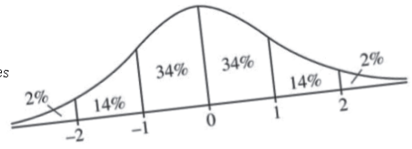


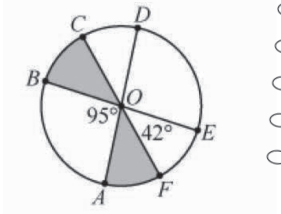
20) The quantities S and T are positive and are related by the equation $S = k/T$, where k is a constant. If the value of S increases by 50 percent, then the value of T decreases by what percent?

A) 25%
B) 33 and ⅓ %
C) 50%
D) 66 and ⅔ %
E) 75%

Explanation: Obviously, don't just assume that the answer is C. Test it.
$S = k/T$. Make it true. $5 = 15/3$. *so* $k = 15$. $1.5\,(5) = 15/x$, $7.5x = 15$, $x = 2$. *X went from 3 to 2 which is a 33% decrease. % change = (difference/original)* $x\ 100 = ((3-2)/3)\,x\,100 = (1/3)\,x\,(100) = 33\%$

The quantities S and T are positive and are related by the equation $S = \frac{k}{T}$, where k is a constant. If the value of S increases by 50 percent, then the value of T decreases by what percent?





- ○ 25%
- ○ $33\frac{1}{3}\%$
- ○ 50%
- ○ $66\frac{2}{3}\%$
- ○ 75%

10, 10, 10, 10, 8, 8, 8, 8, 12, 12, 11, y

The twelve numbers shown represent the ages, in years, of the twelve houses on a certain city block. What is the median age, in years, of the twelve houses on the block?

[ ] years

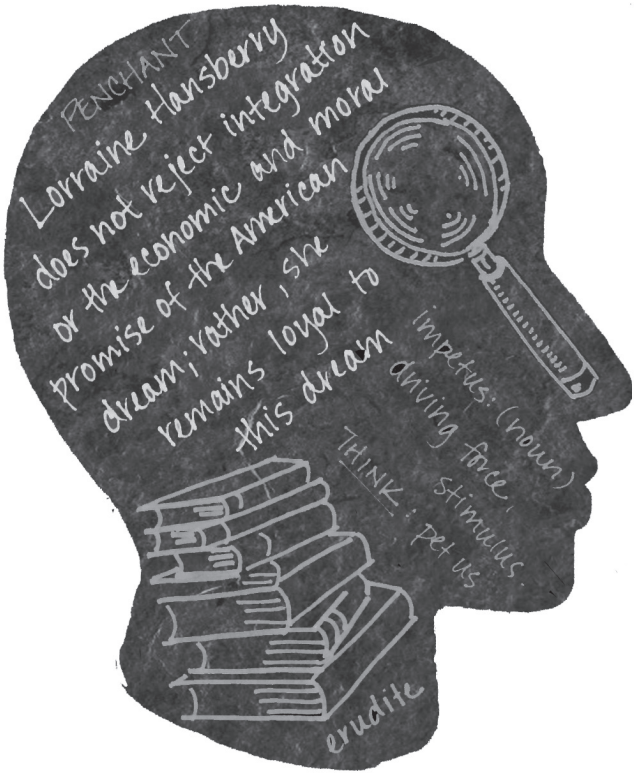
4) There has been much hand-wringing about how unprepared American students are for college. Graff reverses this perspective, suggesting that colleges are unprepared for students. In his analysis, the university culture is largely (i) _____ entering students because academic culture fails to make connections to the kinds of arguments and cultural references that students grasp. Understandably, many students view academic life as (ii) _____ ritual.

A. primed[8] for
B. opaque[10] to
C. essential for
D. an arcane[9]
E. a laudable[11]
F. a painstaking[12]

Explanation: Blank (i) is explained by the rest of the sentence it's in. It makes sense that the culture is unclear, or opaque (**Choice B**) to students "because academic culture fails to make connections" to the things "students grasp". The last sentence continues this sentiment, so **Choice D** works for Blank (ii); "an arcane" ritual would be one students find hard to understand.

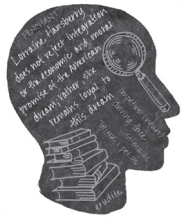
Dramatic literature often _____ the history of a culture in that it takes as its subject matter the important events that have shaped and guided the culture.

confounds
repudiates
recapitulates
anticipates
polarizes



PowerPrep Test 1

Verbal



1) Dramatic literature often _____ the history of a culture in that it takes as its subject matter the important events that have shaped and guided the culture.

A. confounds[1]
B. repudiates[2]
C. recapitulates[3]
D. anticipates
E. polarizes[4]

EXPLANATION: The expression "in that" indicates that an explanation is coming. So "it takes as its subject matter the important events" of a culture is an explanation for what "dramatic literature" is doing in the first part of the sentence. **CHOICE C**, "recapitulates," is a good fit, since "recapitulates" means "to recap," or "to summarize the main points of."

CHOICE A: To "confound" is to confuse or mix up, which doesn't make sense here and is unrelated to the information provided.

CHOICE B: To "repudiate" is to reject, which is clearly the opposite of what is being referenced ("takes as its subject matter…").

CHOICE C: To "recapitulate" is to summarize, which works well here, if not perfectly.

CHOICE D: To "anticipate" is to know in advance and adjust accordingly — not what's being referenced.

CHOICE E: To "polarize" is to move to the extremes — again, not relevant to the specifics provided by the sentence.

---

[1] **confound** (verb): to confuse (a person) or mix up (a thing), or as an exclamation ("confounded" only). "kun FOUND"
Think: **can't find.** I **can't find** my keys anywhere and I'm **confounded** as to where they may be. Where the heck are my **confounded** keys?

[2] **repudiate** (verb): to refuse or accept; to reject. "ruh PYOO dee ate"
Think: **refuse poo I ate**. If I were to eat poo, then my stomach would **refuse** the **poo I ate** and **repudiate** it by vomiting uncontrollably.

[3] **recapitulate** (verb): to summarize. "Ree kuh PIT you late"
Think: **recap.** His **recap** of the news **recapitulated** the day's events.

[4] **polarize** (verb): to separate into two conflicting or opposite positions. "POH lurr eyes" Think: Earth's **poles**. Democrats and Republicans are so **polarized** that I'm surprised they don't stay at the North and South **poles** to keep as far apart as they can.

2) Since she believed him to be both candid and trustworthy, she refused to consider the possibility that his statement had been _____.

A. irrelevant
B. facetious[5]
C. mistaken
D. critical
E. insincere

EXPLANATION: This is a classic contrast set-up: "Since she believed him to be candid and trustworthy," what would she then refuse to consider about him? The opposite of "candid and trustworthy."

CHOICE A: Truthfulness is not directly related to whether or not something is relevant (relevant = related to the topic).

CHOICE B: "Facetious" means sarcastic, and hence is a very tempting choice because of its similarity to the topic at hand (truth). I wouldn't eliminate it, but I don't love it because it's not a perfect fit. Truthful people can still be sarcastic, and vice-versa, because *sarcasm* (lying obviously and intentionally for effect) is not the same as deception (trying to fool or trick someone).

CHOICE C: Again, there is no direct relationship between the answer and the details provided ("mistaken" = wrong). You can be mistaken with or without being trustworthy.

CHOICE D: You can be "critical" with or without being truthful.

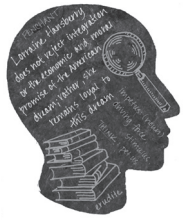
CHOICE E: Yes, correct. You cannot be candid unless you are also truthful. ***Insincere*** is very close to "facetious," but because "insincere" is less related to *joking around* as is facetious, it makes for a slightly better choice here.

I've had plenty of students make strong arguments for **CHOICE B**, and I can't blame them, but there is no denying that **CHOICE E** is also a great choice. The secret is understanding what ETS is looking for, which is not only accuracy, but the general connotation of words. It's a tough one for sure.

The correct answer is **Choice E.**

---

[5] **facetious** (adjective): sarcastic. "fuh SEE shus" Think: **"E" face**. The **facetious** comedian made us smile so much that our **faces** looked like we were constantly saying "**E**." (Try it!)



3) Given how (i) _____ the shortcomings of the standard economic model are in its portrayals of human behavior, the failure of many economists to respond to them is astonishing. They continue to fill the journals with yet more proofs of yet more (ii) _____ theorems. Others, by contrast, accept the criticisms as a challenge, seeking to expand the basic model to embrace a wider range of things people do.

	Blank (i)	**Blank (ii)**
A.	overlooked	D. comprehensive
B.	occasional	E. improbable
C.	patent[6]	F. pervasive[7]

EXPLANATION: Reading this question for the overall story reveals a NEGATIVE attitude about the economists, which is contrasted with a more positive attitude toward the "others" in the last sentence. Blank (i) is explained by the second part of the first sentence: if the failure of economists to respond is "astonishing," then **CHOICE C**, "patent," (whose secondary definition means "obvious") makes sense because not responding to something obvious could logically be "astonishing," as opposed to Choices A and B, which are not strong enough to support that conclusion. Since the tone of the first two sentences is negative, **CHOICE E**, "improbable" (meaning "unlikely"), is a good fit for blank (ii). Further confirmation that the second sentence needs to mean something negative is given by the last sentence, which has a shift to a positive attitude. Choice F, "pervasive" (meaning "extensive") is tempting, because it is normally used in a negative way ("we have a pervasive termite problem"), but we are looking for a word that conveys an idea of wasting one's time on frivolous pursuits, as opposed to addressing the shortcomings of the standard (i.e, pervasive) economic model, so this does not make sense.

---

[6] **patent** (adjective): obvious, apparent. "PAH tint" Think: **pa's tent**. Grand**pa**, an experienced camper through and through, came up with a **patent** solution to the sudden rainshowers: he kept dry in **pa's tent**.

[7] **pervasive** (adjective): prevalent, extensive, widespread, especially in a negative way. "purr VAY sive" Think: **purr + evasive.** Unfortunately, worms are a **pervasive** problem for many cats (**purr**), who must take **evasive** action to avoid contracting them.

4) There has been much hand-wringing about how unprepared American students are for college. Graff reverses this perspective, suggesting that colleges are unprepared for students. In his analysis, the university culture is largely (i) _____ entering students because academic culture fails to make connections to the kinds of arguments and cultural references that students grasp. Understandably, many students view academic life as (ii) _____ ritual.

Blank (i)	**Blank (ii)**
A. primed[8] for	D. an arcane[9]
B. opaque[10] to	E. a laudable[11]
C. essential for	F. a painstaking[12]

EXPLANATION: Blank (i) is explained by the rest of the first sentence. It makes sense that the culture is unclear, or "opaque" (**CHOICE B**) to students "because academic culture fails to make connections" to the things "students grasp." The last sentence continues this sentiment, so **CHOICE D**, "arcane," works for blank (ii); "an arcane" ritual would be one students find hard to understand.

CHOICE A: "Primed for" (ready for) is the opposite of what we want for this blank, since the sentence is telling us that universities are unready for students.

CHOICE C: "Essential for" doesn't make sense because we are given no evidence suggesting that entering students need university culture.

CHOICE E: "Laudable" means praiseworthy, and there is no evidence indicating that students find academic life to be worthy of praise.

CHOICE F: "Painstaking" is a common wrong answer for blank (ii) — this is often due to students conflating its meaning (it means "extremely careful") with the meaning of "painful." But even "painful" wouldn't be supported by the text, since the clue is about students' failure to understand academic culture.

---

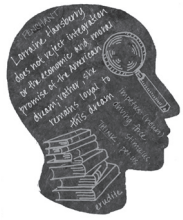
[8] **primed** (adjective): ready. "PRYMED" Think: **primed for prime time**. When a television news anchor has paid her dues, you might say that she's **primed for prime time**.

[9] **arcane** (adjective): mysterious; known only to a few. "are KANE" Think: **Ark of the Covenant**. Indiana Jones understood the **arcane Ark of the Covenant**; the Nazis did not, which is why they perished.

[10] **opaque** (adjective): something that is cloudy, blurry, or difficult to understand. "oh PAKE" Think: an **opaque lake**. If you don't want to get sick, then I don't recommend swimming in an **opaque lake**.

[11] **laudable** (adjective) praiseworthy "LODD uh bull." Think: **applaudable**. Something that's **laudable** is **applaudable**.

[12] **painstaking** (adjective): very careful. "PAINS taking" Think: **taking pains**. As a doctor, **taking pains** to not infect the patient means using **painstaking** technique when washing one's hands before surgery.



5) The narratives that vanquished[13] peoples have created of their defeat have, according to Schivelbusch, fallen into several identifiable types. In one of these, the vanquished manage to (i) _____ the victor's triumph as the result of some spurious[14] advantage, the victors being truly inferior where it counts. Often the winners (ii) _____ this interpretation, worrying about the cultural or moral costs of their triumph and so giving some credence[15] to the losers' story.

	Blank (i)	**Blank (ii)**
A.	construe	D. take issue with
B.	anoint	E. disregard
C.	acknowledge	F. collude in

EXPLANATION: The first sentence is helpful to get the big picture: vanquished peoples are "creating" narratives. This helps clarify that blank (i) should be "construe" (**CHOICE A**), since "construe" means to understand in a particular way. The clue for blank (ii) comes at the end of the last sentence: "and so giving some credence to the losers' story" makes it clear that the victors are agreeing with the losers' interpretation. Therefore, **CHOICE F**, "collude in," is correct, because it means "to go along with."

CHOICE B: "To anoint" means to announce that something or someone is great. Since we are told that the vanquished find the victors to be "inferior," this is a faulty conclusion.

CHOICE C: "To acknowledge" is to give credit for, so this is unlikely, given the vanquished's negative view of the victor.

CHOICE D: "take issue with" is a common phrase that indicates an area of dispute, which is unlikely given the final part of the sentence, which hinges upon agreement ("credence").

CHOICE E: "disregard" doesn't work for the same reason as Choice D.

---

[13] **vanquished** (adjective): defeated. "Van KWISHT"
Think: **van squished**. If a **van squished** the ant crossing the road, then you could say that the ant has been **vanquished.**

[14] **spurious** (adjective): false. "SPUR ee uss"
Think: **spur curious.**
His **spur**-of-the-moment explanation made me **curious** about whether his story was **spurious**.

[15] **credence** (adjective): belief. "KREED ints"
Think: **Creed is.** If you tell me that **Creed is** your favorite band, then I won't give any further **credence** to your musical judgments.

6) The question of (i) _____in photography has lately become nontrivial[16]. Prices for vintage prints (those made by a photographer soon after he or she made the negative) so drastically (ii) _____ in the 1990s that one of those photographs might fetch a hundred times as much as a nonvintage print of the same image. It was perhaps only a matter of time before someone took advantage of the (iii) _____ to peddle newly created "vintage" prints for profit.

Blank (i)	**Blank (ii)**	**Blank (iii)**
A. forgery	D. ballooned	G. discrepancy[17]
B. influence	E. weakened	H. ambiguity[18]
C. style	F. varied	I. duplicity[19]

EXPLANATION: Don't necessarily try to answer the blanks in order—whatever order works best will do. It is only in last line of the text that the quotation marks (indicators of skepticism or specialized terms) around "vintage" let us know that the prints were not in fact vintage at all, which supports **CHOICE A**, "forgery," for blank (i). Line 3 "...might fetch a hundred times as much as a..." tells us that prices of vintage prints have skyrocketed, which supports **CHOICE D**, "ballooned," for blank (ii). Likewise, **CHOICE G**, "discrepancy," works for blank (iii) because it means "a difference or inconsistency" and refers to the large difference in prices between vintage and non-vintage photographs. Beware Choice I, "duplicity." While forging photographs is of course an act of duplicity, the forger is not taking advantage of his *own* duplicity — that would be illogical.

CHOICE B: "Influence" is a rather general word that has to be taken seriously as an answer choice, if only for how general it is. But there isn't any evidence to support choosing this rather easy word.

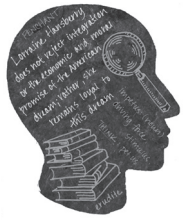
CHOICE C: "Style" doesn't work much because there isn't any other mention of it in the text.

[16] **nontrivial** (adjective): not unimportant. "Non TRIV ee ul" Think: **trivia.** Most of the questions they ask during **trivia** night at the bar are rather **trivial** if you ask me...but my pop-culture-loving roommate finds them **nontrivial**.

[17] **discrepancy** (noun): a difference, divergence, or disagreement. "Dis KREP in see" Think: **this crepe vs. Nancy's**. There seems to be a large discrepancy between the size **this crepe** of mine and that of **Nancy's**...I wonder whether she took a bite of mine while I wasn't looking.

[18] **ambiguity** (noun): The state of being unclear or ambiguous. "am big YOU it ee" Think: **a big "U" for undecided.** When it came time to indicate her political party on the ballot, Virginia checked neither a big "D" for Democrat, nor a big "R" for Republican, but instead, **a big "U" for undecided**.

[19] **duplicity** (noun): The state of being deceptive or two-faced. "Dew PLISS it ee" Think: **duping Liz.** In summer 1995, actor Hugh Grant thought that he could get away with **duping Liz** Hurley...but then along came Divine Brown, and his **duplicity** was exposed.



CHOICE E: Choosing "weakened" would indicate a misunderstanding of which version of the prints was more expensive.

CHOICE F: "Varied" does not support the idea of one type of print (vintage) would cost much more than a nonvintage print of the same image, and there is no evidence given that would support this relationship being anything but consistent.

CHOICE H: "Ambiguity" means uncertainty, and the idea of uncertainty (not knowing or not being sure) is not supported by the text.

Question 7 is based on this passage:

> "Even after numerous products made with artificial sweeteners became available, sugar consumption per capita continued to rise. Now manufacturers are introducing fat-free versions of various foods that they claim have the taste and texture of the traditional high-fat versions. Even if the manufacturers' claim is true, given that the availability of sugar-free foods did not reduce sugar consumption, it is unlikely that the availability of these fat-free foods will reduce fat consumption."

7) Which of the following, if true, most seriously undermines the argument?

A. Several kinds of fat substitute are available to manufacturers, each of which gives a noticeably different taste and texture to products that contain it.
B. The products made with artificial sweeteners did not taste like the products made with sugar.
C. The foods brought out in sugar-free versions did not generally have reduced levels of fat, but many of the fat-free versions about to be introduced are low in sugar.
D. People who regularly consume products containing artificial sweeteners are more likely than others to consume fat-free foods.
E. Not all foods containing fat can be produced in fat-free versions

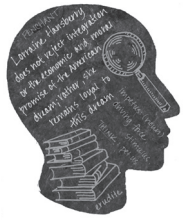
EXPLANATION: First, isolate and paraphrase the argument, and what the argument is predicated on. Perhaps you might write, "Since sugar-free didn't work, fat-free won't work." To undermine an argument, look for a choice that introduces new information raising a plausible objection to the argument or its basis. The correct answer, **CHOICE B**, does this by stating that the sugar-free foods didn't taste real. If that's true, then the argument is weakened since the argument uses the failure of sugar-free foods as its basis for arguing that fat-free foods won't work either. In other words, it's possible that the fat-free foods will taste real, so arguing that they'll fail based on what happened with sugar-free foods (that didn't taste real) is a weak argument. Because the argument relies on a comparison/analogy between fat-free and sugar-free foods, an answer choice that points out their differences will serve to weaken the argument.

CHOICE A: This statement is outside the scope of the argument: the fact that there are several different types of fat-free products is irrelevant to the overall effectiveness of fat substitutes.

CHOICE C: This choice might be tempting for some, but all it does is mix up the qualities of the two types of foods being compared. Neither the fat content of sugar-free foods, nor the sugar content of fat-free foods is directly relevant to the effectiveness of these substitutes.

CHOICE D: Similar to Choice C in that it tries to draw connections between the two types of evidence cited, rather than questioning their similarities, which is how one would best undermine this argument.

CHOICE E: Outside the scope of the argument. We are comparing fat-free foods to sugar-free foods in this argument, so who cares that not all foods are capable of being made in fat-free versions?



Questions 8-11 are based on this passage:

Recent studies of sediment in the North Atlantic's deep waters reveal possible cyclical patterns in the history of Earth's climate. The rock fragments in these sediments are too large to have been transported there by ocean currents; they must have reached their present locations by traveling in large icebergs that floated long distances from their point of origin before melting. Geologist Gerard Bond noticed that some of the sediment grains were stained with iron oxide, evidence that they originated in locales where glaciers had overrun outcrops of red sandstone. Bond's detailed analysis of deep-water sediment cores showed changes in the mix of sediment sources over time: the proportion of these red-stained grains fluctuated back and forth from lows of 5 percent to highs of about 17 percent, and these fluctuations occurred in a nearly regular 1,500-year cycle.

Bond hypothesized that the alternating cycles might be evidence of changes in ocean-water circulation and therefore in Earth's climate. He knew that the sources of the red-stained grains were generally closer to the North Pole than were the places yielding a high proportion of "clean" grains. At certain times, apparently, more icebergs from the Arctic Ocean in the far north were traveling south well into the North Atlantic before melting and shedding their sediment.

Ocean waters are constantly moving, and water temperature is both a cause and an effect of this movement. As water cools, it becomes denser and sinks to the ocean's bottom. During some periods, the bottom layer of the world's oceans comes from cold, dense water sinking in the far North Atlantic. This causes the warm surface waters of the Gulf Stream to be pulled northward. Bond realized that during such periods, the influx of these warm surface waters into northern regions could cause a large proportion of the icebergs that bear red grains to melt before traveling very far into the North Atlantic. But sometimes the ocean's dynamic changes, and waters from the Gulf Stream do not travel northward in this way. During these periods, surface waters in the North Atlantic would generally be colder, permitting icebergs bearing red-stained grains to travel farther south in the North Atlantic before melting and depositing their sediment.

The onset of the so-called Little Ice Age (1300-1860), which followed the Medieval Warm Period of the eighth through tenth centuries, may represent the most recent time that the ocean's dynamic changed in this way. If ongoing climate-history studies support Bond's hypothesis of 1,500-year cycles, scientists may establish a major natural rhythm in Earth's temperatures that could then be extrapolated20 into the future. Because the midpoint of the Medieval Warm Period was about AD. 850, an extension of Bond's cycles would place the midpoint of the next warm interval in the twenty-fourth century.

8) According to the passage, which of the following is true of the rock fragments contained in the sediments studied by Bond?[20]

A. The majority of than are composed of red sandstone.
B. They must have reached their present location over 1,500 years ago.
C. They were carried by icebergs to their present location.
D. Most of than were carried to their present location during a warm period in Earth's climatic[21] history.
E. They are unlikely to have been carried to their present location during the Little Ice Age.

EXPLANATION: The second sentence of the passage talks about rock fragments "...(reaching) their present locations by traveling in large icebergs...," so **CHOICE C** is correct. Note that the easiest way to answer this question is by finding the specific part of the passage discussing the keywords "rock fragments" in the question.

CHOICE A: We are told in line 6 that "[sediment grains] originated in locales where glaciers had overrun outcrops of red sandstone," but there is no evidence to conclude that the majority of rock fragments are composed of red sandstone, which is a more specific conclusion.

CHOICE B: The passage refers to "1,500 year cycles" of the proportions of red-stained grains, but not a time limit of at least 1,500 years ago.

CHOICE D: If anything, the opposite is true: it is the cooling of the oceans that leads to icebergs (which carry red-stained grains) traveling farther south than normal, which would likely happen during cool periods in Earth's climatic history. Besides, there is certainly no definitive evidence in the text to conclude that most of them were carried to their present locations during a warm period (similar to "majority" in Choice A).

CHOICE E: The first sentence of the last paragraph indicates that "The onset of the so-called Little Ice Age (1300-1860), which followed the Medieval Warm Period of the eighth through tenth centuries, may represent the most recent time that the ocean's dynamic changed in this way." If we glance upward to the preceding paragraph, we can see that "in this way" refers to the ocean having a higher proportion of red-stained grains. Thus, the opposite is true: they are likely to have been carried to their present location during the Little Ice Age.

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[20] **extrapolate** (verb) to infer, conclude or draw a conclusion based on another observation or fact. "eks TRAP oh late" Think: **Extra police = late**. Due to the fact that there are **extra police** on the highway today, and traffic is at a standstill, I'm guessing that there was a big accident. Hence, I can **extrapolate** that we are going to be **late** to work.

[21] **climatic** (adjective): pertaining to climate and weather. "Kly MAT ick" Think: **dramatic**. Due to global warming, **climatic** events such as hurricanes and floods have been much more **dramatic** in recent years. (Don't confuse with "climactic," which refers to the climax of a work of art.)

9) In the final paragraph of the passage, the author is concerned primarily with

A. answering a question about Earth's climatic history
B. pointing out a potential flaw in Bond's hypothesis
C. suggesting a new focus for the study of ocean sediments
D. tracing the general history of Earth's climate
E. discussing possible implications[22] of Bond's hypothesis

EXPLANATION: With the first sentence of the last paragraph, the author brings the focus from Bond's hypothesis to our current world. The second sentence, "If ongoing climate-history studies support Bond's hypothesis... scientists may establish a major natural rhythm...that could then be extrapolated into the future." speculates about what scientists could do if Bond's hypothesis is true, which is why **CHOICE E** is correct. The final sentence merely continues this speculation.

CHOICE A: Although a question may seem to be answered in the first sentence of the last paragraph, that sentence merely sets up the speculation in the rest of the paragraph.

CHOICE B: If anything, the final paragraph supports Bond's hypothesis.

CHOICE C: To conclude that the author is suggesting a new focus would be speculation – talking about possibilities does not necessarily mean there's a suggestion involved.

CHOICE D: This is way too broad: the history of Earth's climate as a whole is much bigger than the narrow scope of the passage.

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[22] **implication** (noun): a conclusion, hint, suggestion, connection or insinuation (not directly stated). "imp lih KAY shun" Think: **implying = suggesting**. When Mike's date told him that she was tired and it was late, **implying** that was that it was time to go home, the **implication** was obvious to everyone but him. "OK, want to get some coffee then?" he asked cluelessly.

10) According to the passage, Bond hypothesized that which of the following circumstances would allow red-stained sediment grains to reach more southerly latitudes?

A. Warm waters being pulled northward from the Gulf Stream
B. Climatic conditions causing icebergs to melt relatively quickly
C. Icebergs containing a higher proportion of Iron oxide than usual
D. The formation of more icebergs than usual in the Far north
E. The presence of cold surface waters in the North Atlantic

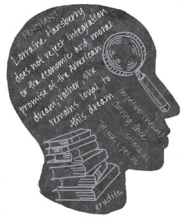
EXPLANATION: Searching for the part of the passage discussing "southerly latitudes" leads to the last sentence of the third paragraph, because it also provides reasoning for the southerly travel: "During these periods, surface waters in the North Atlantic would generally be colder, permitting icebergs bearing red-stained grains to travel farther south in the North Atlantic before melting and depositing their sediment." This sentence provides evidence that **CHOICE E** is correct; colder water allowed the grain-carrying icebergs to deposit sediment farther south.

CHOICE A: This is the opposite of what the passage suggests.

CHOICE B: This is the opposite as well.

CHOICE C: No mention is made of icebergs containing more or less iron oxide.

CHOICE D: No mention is made of more icebergs forming – don't draw your own conclusions based on what the passage says about temperatures.



11) It can be inferred from the passage that in sediment cores from the North Atlantic's deep waters, the portions that correspond to the Little Ice Age

A. differ very little in composition from the portions that correspond to the Medieval Warm Period
B. fluctuate significantly in composition between the portions corresponding to the 1300s and the portions corresponding to the 1700s
C. would be likely to contain a proportion of red-stained grains closer to 17 percent than to 5 percent
D. show a much higher proportion of red-stained grains in cores extracted from the far north of the North Atlantic than in cores extracted from further south
E. were formed in part as a result of Gulf Stream waters having been pulled northward

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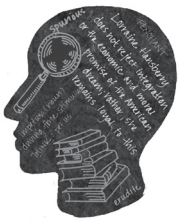
EXPLANATION: Logically, the Little Ice Age was a time when surface waters were colder, but there is evidence in the first sentence of the fourth paragraph as well: "The Little Ice Age...may represent the most recent time that the ocean's dynamic changed in this way." The phrase "this way" refers to the end of the third paragraph, which explains that colder waters allowed icebergs to float farther south, so sediments must have been deposited further south during that time. Bond's hypothesis is about the fluctuations in the proportion of red-stained grains, and **CHOICE C** is correct because during those colder periods, more icebergs would have floated into the North Atlantic and the red-stained grains deposited would therefore be at the higher end.

CHOICE A: No mention is made of the icebergs in the Medieval Warm Period, so we shouldn't draw our own conclusions about them.

CHOICE B: Not enough information is given for us to make any conclusions about sediment cores from the 1300s vs. the 1700s.

CHOICE D: This choice seems logical, but we unfortunately don't have enough information to support the northern cores having a higher concentration since the author doesn't talk about icebergs melting in the northern regions.

CHOICE E: This is the opposite of what we need; the point of the passage is that sometimes the Gulf Stream waters don't flow northward, allowing icebergs to float farther south.



Select the two answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning.

12) Early critics of Emily Dickinson's poetry mistook for simplemindedness the surface of artlessness[23] that in fact she constructed with such _____.

A. astonishment
B. craft
C. cunning[24]
D. innocence
E. naïveté[25]
F. vexation

EXPLANATION: The sentence creates a contrast between what critics "mistook" as "simplemindedness" (a lack of deep thoughts) and "artlessness" (having no effort or pretentiousness) and what "in fact" was true, i.e., the information provided by the blank. A good prediction for the blank would therefore be the *opposite* of "simplemindedness" and "artlessness," such as "artfulness" or "complexity." Both "craft" and "cunning" mean "cleverness," which fit the bill and create a logical contrast to the critics' mistaken impression of Dickinson's poetry. Thus the correct answers are **CHOICES B** and **C**.

CHOICE A: "Astonishment" (the state of being amazed) is not the opposite of simplemindedness.

CHOICE B: Yes, correct. "Craft" (skill) is the opposite of artlessness (no effort).

CHOICE C: Yes, correct. The word "cunning" (clever forethought, often in a tricky or deceptive way), despite its negative connotation, fits here because Dickinson was in fact being deceptive by disguising her poetry as simpleminded.

CHOICE D: "Innocence" is similar to simplemindedness, but does not fit here because we are looking for an antonym, not a synonym.

CHOICE E: "Vexation[26]" is the state of being frustrated, annoyed or worried, which clearly does not fit here.

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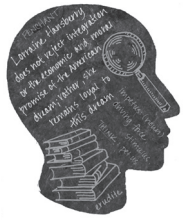
[23] **artlessness** (noun): having no effort or pretentiousness. "ART less" Think: **artless and heartless**. His flawless, simple, and easy cello-playing technique was at once his greatest strength and his greatest weakness: critics saw how **effortless** it was for him and proclaimed his playing **artless and heartless**.

[24] **cunning** (noun): clever forethought, often in a tricky or deceptive way. "KUN ing" Think: **cunning kung-fu**. In my opinion, the best kind of kung-fu is **cunning kung-fu**, where you seek to defeat your opponent through **deception** instead of just physical skill.

[25] **naïveté** (adjective): lack of experience, wisdom or judgment. "nye eve uh TAY" Think: **Adam and Eve**. Some people take the creation parable of **Adam and Eve** literally, but as a believer in science I attribute that to **naïveté**.

[26] **vexation** (noun): the state of being frustrated, annoyed, or worried. "VEKS ay shun" Think: **ex-nation**. I am filled with **vexation** that if Trump is elected president, the U.S. will soon be known as an **ex-nation**.



13) The macromolecule RNA is common to all living beings, and DNA, which is found in all organisms except some bacteria, is almost as _____.

A. comprehensive
B. fundamental
C. inclusive
D. universal
E. significant
F. ubiquitous[27]

EXPLANATION: The description "common to all" in the first part of the sentence is continued in the second part of the sentence (this continuation is indicated by the word "and"). A good prediction for the blank would be the same phrase — "common to all." **CHOICES D** and **F** are correct — both "universal" and "ubiquitous" mean "everywhere," which creates a very similar meaning to "common to all."

CHOICE A: "Comprehensive" means "covering all aspects of something," which although close to the meaning of what we are looking for, does not quite fit. It also lacks a synonym pair.

CHOICE B: "Fundamental" means "basic and necessary," which again, is quite close to what we are looking for, but is not quite the same as "common to all." It also lacks a synonym pair.

CHOICE C: "Inclusive" means "that which includes others," which yet again is frustratingly close to what we are looking for, but not quite there.

CHOICE D: Yes, "universal" and "common to all" are synonyms.

CHOICE E: "Significant" means "important," which is close but yet again not quite the same as "common to all."

CHOICE F: Yes, "ubiquitous" means "everywhere" and is thus a synonym of "common to all."

PLEASE NOTE: every one of these answer choices is at least close to being correct! It goes to show why you should read all answer choices before making any final decisions about your answer.

[27] **ubiquitous** (adjective): existing everywhere. "ooh BICK wit us" Think: **you big Quidditch. You big Quidditch** fans have made the *Harry Potter* sport **ubiquitious** on college campuses.

14) While in many ways their personalities could not have been more different—she was ebullient[28] where he was glum, relaxed where he was awkward, garrulous[29] where he was _____ —they were surprisingly well suited.

A.	solicitous[30]	D.	laconic[31]
B.	munificent[32]	E.	fastidious[33]
C.	irresolute[34]	F.	taciturn[35]

EXPLANATION: The sentence sets up a series of contrasts between the two described people, so the blank needs to mean the opposite of "garrulous," which means "overly talkative." **CHOICES D** and **F** are correct: both "laconic" and "taciturn" mean "shy," "using few words" or "reluctant to speak."

CHOICE A: A "solicitous" person is one who cares about something or someone, or one who seeks something (think of "NO SOLICITING" signs), and this is not a synonym of shy.

CHOICE B: A "munificent" person is one who is generous (think *muni* = money), which is not a synonym of shy.

CHOICE C: An irresolute person is one who is not determined (resolute = determined), which is not a synonym of shy.

CHOICE D: Yes, "laconic" is a synonym of shy.

CHOICE E: A fastidious person is one who is very attentive to details (think *fast* and *tidy*), which is not a synonym of shy.

CHOICE F: Yes, "taciturn" is a synonym of shy.

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[28] **ebullient** (adjective): cheerful, bubbly, full of energy. "Eh BOOL ee int" Think: **Red Bull**. After I chugged a giant **Red Bull,** I felt **ebullient**.

[29] **garrulous** (adjective) talkative, chatty, prone to discussing trivial things. "GAH ruh luss" Think: **girls rule us**. The reason **girls rule us** is they have a talent for being **garrulous** and talking us into things we shouldn't do.

[30] **solicitous** (adjective): concerned for. "so LISS it uss" Think: **solely listened to us**. I knew the man was **solicitous** because he **solely listened to us**.

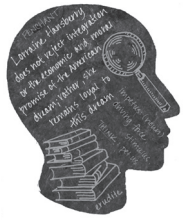
[31] **laconic** (adjective): concise, brief, succinct. "luh KON ick" Think: **lacking kick**. His personality was **lacking kick**; he was so **laconic** that he barely said hello.

[32] **munificent** (adjective): generous. "MOON if uh sint" Think: **money sent**. The **money sent** to us by our grandparents every year makes them **munificent**.

[33] **fastidious** (adjective): strong attention to detail, having very picky standards. Think: **fast to tidy up**. My roommate is **fastidious** about cleaning; she gets mad if I am not **fast to tidy up**.

[34] **irresolute** (adjective): not firm or determined, **not resolute**. **resolute** (adjective): firmly determined. Think: **resolution**. It's no use to make a New Year's **resolution** if you're not **resolute** enough to follow through with it.

[35] **taciturn** (adjective): reluctant to speak, not talkative. Think: **takes his turn**. If she's passive and taciturn at the debate, and just politely **takes her turn** when speaking, then she'll never win.



15) Even in this business, where _____ is part of everyday life, a talent for lying is not something usually found on one's resume.

A. aspiration
B. mendacity[36]
C. prevarication[37]
D. insensitivity
E. baseness[38]
F. avarice[39]

EXPLANATION: The two parts of the sentence contrast with each other, as evidenced by the use of the word "even in this business, where...," which sets up an expectation of one thing, but a reality of another. Since the second part of the sentence says that "...lying is not usually" on a resume, the first part of the sentence must mean something nearly opposite — such as "lying is common." **CHOICES B** and **C** are correct — they both mean "lying," so they create that contrast.

CHOICE A: "Aspiration" is clearly a decoy answer, because although those who aspire (seek to achieve something) greatly will often lie in order to do so, these two concepts are not necessarily related. It also lacks a synonym pair.

CHOICE B: Yes, correct. "Mendacity" means dishonesty, so it works here.

CHOICE C: Yes, correct. "Prevarication" means avoidance of the truth, so it works here.

CHOICE D: "Insensitivity" is not the same as dishonesty.

CHOICE E: "Baseness" is the quality of lacking moral principles or character, and is not quite the same as dishonesty, because you can be base with or without being honest.

CHOICE F: "Avarice" is unsupported since there is no mention of greed.

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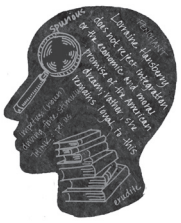
[36] **mendacity** (noun): dishonesty, deception. "men DA sit ee"
Think: **mend the city**. The former mayor of Providence, Buddy Cianci, promised that he would **mend the city** and its underhanded ways, but his **mendacity** became apparent when he himself was arrested for corruption.

[37] **prevarication** (noun): avoidance of the truth, dishonesty. "pre vair uh KAY shun" Think: **pre-verification.** Because the leasing agent had been fooled by **prevarication** in the past, she required **pre-verification** of good credit before allowing a potential tenant to fill out a rental application.

[38] **baseness** (noun): morally low, having bad character, dishonorable. "BASE ness" Think: **basement**. In movies, plays and comic books, antagonists who are filled with **baseness** usually reside in a dungeon, secret lair or underground **basement**.

[39] **avarice** (noun): greed. "AVE uh riss" Think: **have all the rice**. During the food crisis in the third-world nation, its greedy dictator showed his **avarice** by proclaiming, "I'll have **all the rice** for myself — and my people can fend for themselves."



Question 16 is based on this passage.

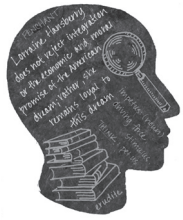
> Historians frequently employ probate inventories — lists of possessions compiled after a person's death — to estimate standard of living. Because these inventories were taken by amateur assessors according to unwritten rules, they are sometimes unreliable. One way to check their accuracy is to compare them to archaeological records. A study of records from the state of Delaware in the eighteenth century found that while very few inventories listed earthenware, every excavation contained earthenware. Earthenware may have gone unlisted simply because it was inexpensive. But if it was so commonplace, why was it listed more often for wealthy households? Perhaps the more earthenware people had, the more likely appraisers were to note it. A few bowls could easily be absorbed into another category, but a roomful of earthenware could not.

16) Select the sentence that provides support for an answer to a question in the passage.

EXPLANATION: The question, "But if it was so commonplace, why was it listed more often for wealthy households?" is answered by the second to last sentence. **The final sentence is correct** because it provides supporting evidence to the second to last sentence.

Questions 17 to 19 are based on this passage.

> In the 1980s, neuroscientists studying the brain processes underlying our sense of conscious will compared subjects' judgments regarding their subjective will to move (W) and actual movement (M) with objective electroencephalographic activity called readiness potential, or RP. As expected, W preceded M: subjects consciously perceived the intention to move as preceding a conscious experience of actually moving. This might seem to suggest an appropriate correspondence between the sequence of subjective experiences and the sequence of the underlying events in the brain. But researchers actually found a surprising temporal relation between subjective experience and objectively measured neural events: in direct contradiction of the classical conception of free will, neural preparation to move (RP) preceded conscious awareness of the intention to move (W) by hundreds of milliseconds.



17) Based on information contained in the passage, which of the following chains of events would most closely conform to the classical conception of free will?

A. W followed by RP followed by M
B. RP followed by W followed by M
C. M followed by W followed by RP
D. RP followed by M followed by W
E. RP followed by W and M simultaneously

EXPLANATION: The last sentence explains a sequence of events that contradicted "in direct contradiction…"the classical conception of free will: (RP) preceding (W). Therefore, the classical conception must be the opposite of the researchers' findings: (W) preceding (RP). In addition, earlier in the passage, we read that "as expected, W preceded M," so the classical conception must have W preceding M. **CHOICE A** is correct: it has W preceding both RP and M.

CHOICE B: If you missed this question, we bet you picked B, but this is in fact what the new experiment showed in contradiction of the classical one.

CHOICE C: "As expected, W preceded M" — therefore, the classical theory had W preceding M.

CHOICE D: Wrong for the same reason as Choice C.

CHOICE E: W came before M, as expected, so the classical couldn't have had them occurring simultaneously.

18) In the context in which it appears, "temporal"[40] most nearly means

A. secular[41]
B. mundane[42]
C. numerical
D. physiological
E. chronological[43]

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[40] **temporal** (adjective): relating to time. "TEM purr ul" Think: **temporary**. Technically, diamonds aren't forever; in a **temporal** sense, they're only **temporary** and will turn to dust one day.

[41] **secular** (adjective): not religious. "SEK you lurr" Think: **sex u later**. "If you are religious, then I am not interested, but if you are **secular** then I might want to **sex u later**," said the poorly written Tinder profile.

[42] **mundane** (adjective): boring, dull, ordinary. "Mun DANE" Think: **Mondays**. Asking someone whether they have a "case of the **Mondays**" is such a **mundane** saying that it's not funny anymore.

[43] **chronological** (adjective): ordered by time. "kron oh LODGE ih kull" Think: **chronic pain. Chronic** pain is the type of pain that keeps coming back, **time** after **time**. (Also, a chronograph is a fancy word for a stopwatch.)

EXPLANATION: "Temporal" means "concerning time," and the first part of the last sentence (where the word "temporal" appears) is explained by the second part of the last sentence, in which a discussion of time sequence occurs. **CHOICE E** is therefore correct because "chronological" means "related to time."

CHOICE A: "Secular" has nothing to do with the discussion involved.

CHOICE B: Neither does "mundane."

CHOICE C: "Numerical" might seem appropriate, but we're talking about time sequence, not just numbers.

CHOICE D: "Physiological" might seem to fit, too, but the discussion following is all about sequence, not physiology.

19) The author of the passage mentions the classical conception of free will primarily in order to

A. argue that earlier theories regarding certain brain processes were based on false assumptions.
B. suggest a possible flaw in the reasoning of neuroscientists conducting the study discussed in the passage.
C. provide a possible explanation for the unexpected results obtained by neuroscientists.
D. cast doubt on neuroscientists' conclusions regarding the temporal sequence of brain processes.
E. indicate the reason that the results of the neuroscientists' study were surprising.

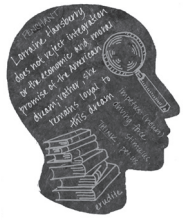
EXPLANATION: The last sentence, in which the author mentions the classical conception of free will, begins by bringing up a "surprising" sequence of events. A good prediction for why the author mentions the "classical conception" might therefore be to provide context to explain why the events were surprising. **CHOICE E** is correct; by mentioning the classical (i.e., expected) conception being contradicted, the author gives the reader a reason that the events were unexpected.

CHOICE A: It would be going too far outside the passage to speculate that a contradiction to the classical theory = it was based on false assumptions.

CHOICE B: If anything, the researchers in the passage are lauded; no flaw is pointed out.

CHOICE C: We just get that the results were surprising and don't get an explanation of why they occurred.

CHOICE D: It would be going too far to suggest that a surprising result casts doubt on something as broad as "neuroscientists' understanding."



Question 20 is based on this passage.

Rain-soaked soil contains less oxygen than does drier soil. **The roots of melon plants perform less efficiently under the low-oxygen conditions present in rain-soaked soil.** When the efficiency of melon roots is impaired, the roots do not supply sufficient amounts of the proper nutrients for the plants to perform photosynthesis at their usual levels. It follows that **melon plants have a lower-than-usual rate of photosynthesis when their roots are in rain-soaked soil.** When the photosynthesis of the plants slows, sugar stored in the fruits is drawn off to supply the plants with energy. Therefore, ripe melons harvested after a prolonged period of heavy rain should be less sweet than other ripe melons.

20) In the argument given, the two highlighted portions play which of the following roles?

A. The first states the conclusion of the argument as a whole; the second provides support for that conclusion.
B. The first provides support for the conclusion of the argument as a whole; the second provides evidence that supports an objection to that conclusion.
C. The first provides support for an intermediate conclusion that supports a further conclusion stated in the argument; the second states that intermediate conclusion.
D. The first serves as an intermediate conclusion that supports a further conclusion stated in the argument; the second states the position that the argument as a whole opposes.
E. The first states the position that the argument as a whole opposes; the second supports the conclusion of the argument.

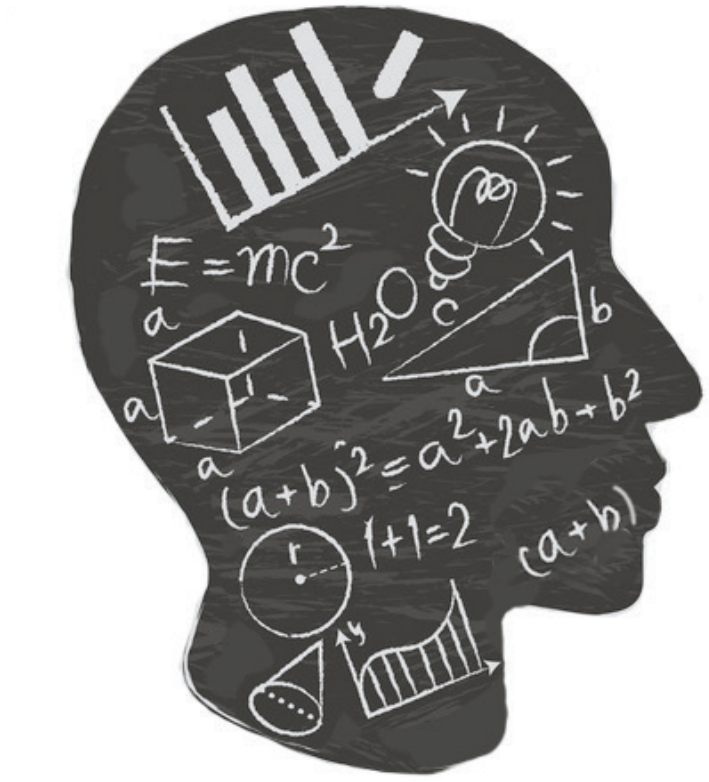
EXPLANATION: It can be helpful to classify each sentence for questions about function or role. The first sentence is a fact. The second sentence is another fact (in what seems to be a chain of events regarding melon plants). The third sentence is another related fact. The fourth sentence, "It follows that…" is a conclusion based on the preceding facts. The fifth sentence is another fact, and the final sentence is a conclusion based on the preceding facts. So a good prediction for the answer would be that the first bolded portion is a fact, and the second bolded part is a conclusion. **CHOICE C** is correct; the fact in the first bold part supports the conclusion in the second bold part, which in turn supports the conclusion in the final sentence.

CHOICE A: The first part is merely a fact, not a conclusion.

CHOICE B: The first part of this choice works, but the second part certainly doesn't support an objection to the conclusion — it, too, supports the conclusion.

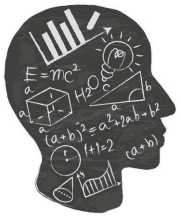
CHOICE D: The first part of this choice works, but the second doesn't — we don't get any discussion of what the argument opposes.

CHOICE E: Wrong — the first part goes with the argument

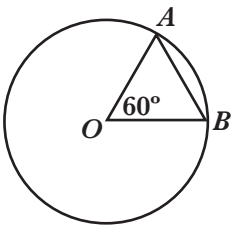


PowerPrep Test 1

Quantitative



1)



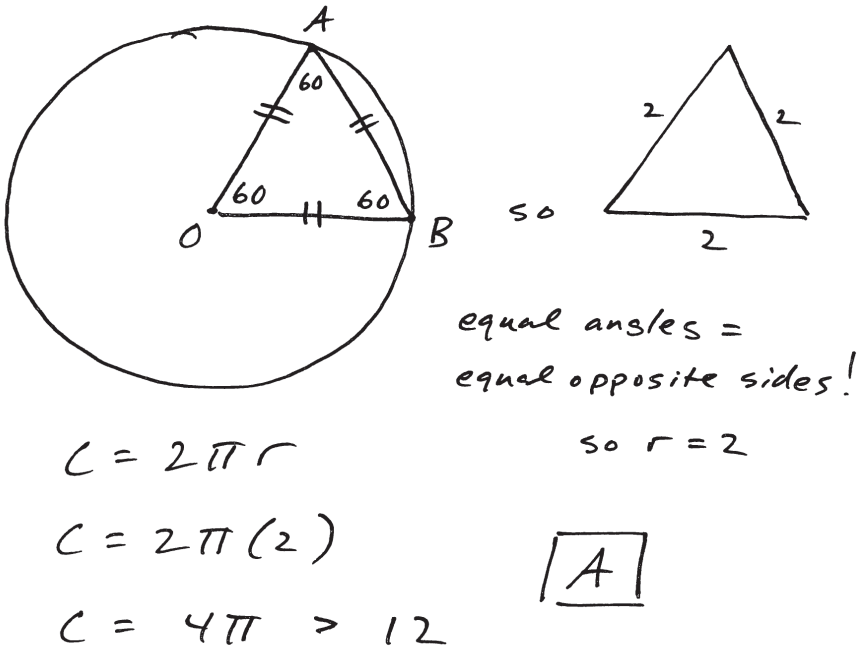
O is the center of the circle, and the perimeter of DAOB is 6.

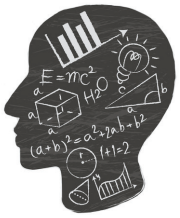
Quantity A	Quantity B
The circumference of the circle	**12**

A. Quantity A is greater.
B. Quantity B is greater.
C. The two quantities are equal.
D. The relationship cannot be determined from the information given.

EXPLANATION: One important principle of circles is that "all radii are equal." Here, we have two radii, OA and OB. If they are equal then so are their opposite angles, meaning that angles AOB and ABO are equal and thus both 60 degrees, meaning that the remaining angle is also 60 degrees (180 degrees in a triangle).

Now, we have an equilateral triangle (all sides equal). Given the fact that the perimeter is 6, we can divide 6 by 3 sides to get a radius of 2, making **CHOICE A** correct.





2) A certain recipe requires $3/2$ cups of sugar and makes 2 dozen cookies. (1 dozen = 12)

Quantity A	Quantity B
The amount of sugar required for the same recipe to make 30 cookies	**2 cups**

A. Quantity A is greater.
B. Quantity B is greater.
C. The two quantities are equal.
D. The relationship cannot be determined from the information given.

EXPLANATION: This is the type of question that can easily take forever to solve if you're not solid on your fraction and ratio fundamentals. However, if you're confident and prepared, then a question like this one should come easily.

3/2 = 1.5 so 1.5 cups of sugar for 24 cookies. I suggest that you multiply both sides of that fraction by 2:3 cups of sugar for 48 cookies. How many cups of sugar for 30 cookies? Let's set up a simple proportion and find out: cups/sugar = 3/48 = *x*/30. Cross multiply. 48*x* = 90, so *x* < 2, making **CHOICE B** correct.

$$\frac{\frac{3}{2}\ \text{cups sugar}}{24\ \text{cookies}} = \frac{X\ \text{cups sugar}}{30\ \text{cookies}}$$

cross multiply!

$$\frac{30}{1}\cdot\frac{3}{2} = 24x$$

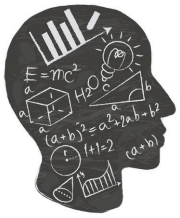
$$\left[\frac{90}{2} = 24x\right]\cdot 2$$

$$[90 = 48x] \div 48$$

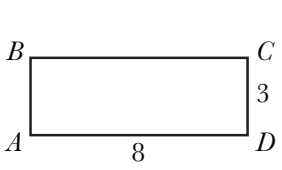
$$x = \frac{90}{48} < 2$$

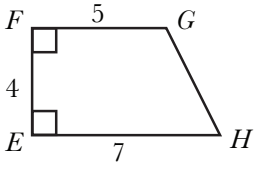
TEST ON CALC.

[B]



3)





Quantity A	Quantity B
The area of rectangular region ABCD	**The area of trapezoidal region EFGH**

A. Quantity A is greater.
B. Quantity B is greater.
C. The two quantities are equal.
D. The relationship cannot be determined from the information given.

EXPLANATION: Area of a rectangle = (base)(height).
Area of ABCD = 8 x 3 = 24

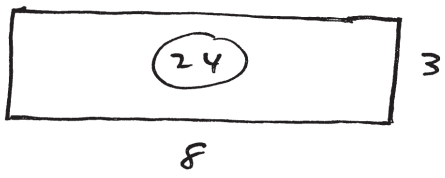
Split trapezoidal region EFGH into a 5 x 4 rectangle (area 20) and a 2 x 4 triangle.

Area of a triangle = bh/2 = 4. 20 + 4 = 24.

Or, area of a trapezoid = ½ (base 1 + base 2) * height

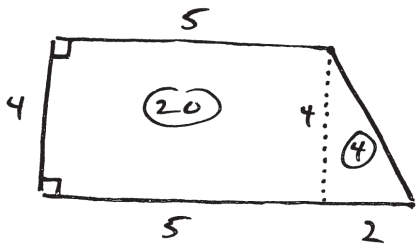
½ (5 + 7) 4 = ½ (12) 4 = 24.

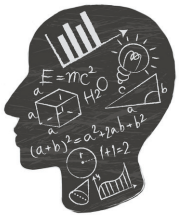
Answer: CHOICE C



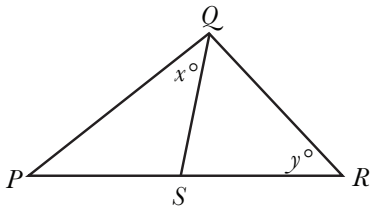
24 = 20 + 4

C





4)



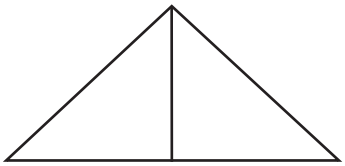
PS=*SR*

Quantity A	**Quantity B**
x	***y***

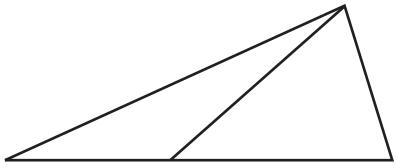
A. Quantity A is greater.
B. Quantity B is greater.
C. The two quantities are equal.
D. The relationship cannot be determined from the information given.

EXPLANATION: This one is tough because it doesn't have a lot of numbers. It is certainly true from the drawing that the measure of angle y looks greater than the measure of angle *x*. But remember that *on the GRE, figures are not necessarily drawn to scale*! Thus, it is better to try to re-draw questions like these in order to exaggerate the differences, while still keeping the requirements of the question intact.

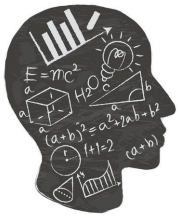
For example, it is easy to draw a version of this where $x = y$ (just make *QS* perpendicular to *PR*). In that case, the answer would be Choice C. Cross off Choices A and B.



Then, it would be easy to make another triangle where the apex is shifted even further over to the right. In this case, *y* would be far greater than *x* (B).



B and C = **CHOICE D**.



5) $6 < x < 7$

$y = 8$

Quantity A	Quantity B
x/y	**0.85**

A. Quantity A is greater.
B. Quantity B is greater.
C. The two quantities are equal.
D. The relationship cannot be determined from the information given.

EXPLANATION: *x* is between 6 and 7, and *y* is a constant equal to 8. We are comparing *x/y* to 0.85, so naturally it makes sense that we would test the low end and the high end of *x*'s range.

Even though *x* is technically greater than 6, it makes sense to test 6 because *x* could be *just barely larger* than 6, i.e, 6.01, and it makes sense to test 7 because *x* could be *just barely smaller* than 7 as well. Of course we must keep in mind that 6 and 7 are not valid values, but they help to establish the exact boundaries of the term (*x/y*).

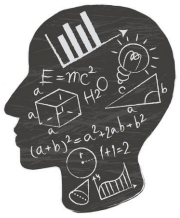
6/8 = .75 answer = B
7/8 = .875 answer = A (notice the "wiggle room" between .85 and .875)

A and B means **CHOICE D** is correct.

The mistake that many people make is not testing numbers that are close enough to the high or low range, like 6.25 and 6.75. If you are hesitant about the using the "boundary" method I described, then you could simply use the calculator and try *x* values of 6.01 and 6.99, which would also work.

6.01/8 = .751, answer = B
6.99/8 = .874, answer = A

Finding A in one instance, and B in another instance, means that **CHOICE D** is our correct answer.



6) The average (arithmetic mean) of 100 measurements is 23, and the average of 50 additional measurements is 27.

Quantity A	Quantity B
The average of the 150 measurements	**25**

A. Quantity A is greater.
B. Quantity B is greater.
C. The two quantities are equal.
D. The relationship cannot be determined from the information given.

EXPLANATION: Average = Total / # of things. Important to memorize this one. So 23 = 1st total/100, 1st total = 2300. 27 = 2nd total/50, 1350 = 2nd total. Average of both = total of both / # of both. Average of both = (2300+1350) / 150, 3650/150 = 24.3333 (use calculator).

24.33 < 25 so **CHOICE B** is correct.

$$\text{Average} = \frac{\text{total}}{\#\text{ of things}}$$

$$23 = \frac{\text{total}_1}{100}, \quad 2300 = \text{total}_1$$

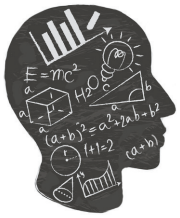
$$27 = \frac{\text{total}_2}{50}, \quad 1350 = \text{total}_2$$

$$? = \frac{\text{total}_1 + \text{total}_2}{100+50} =$$

USE CALC $\quad \frac{2300+1350}{150} = 24.\overline{3}$

$$24.\overline{3} < 25$$

B



7) List L consists of the numbers 1, $\sqrt{2}$, x, and x^2, where $x > 0$, and the range of the numbers in list L is 4.

Quantity A	Quantity B
x	2

A. Quantity A is greater.
B. Quantity B is greater.
C. The two quantities are equal.
D. The relationship cannot be determined from the information given.

EXPLANATION: If the range of the numbers in the list is 4, and $x > 0$, then x^2 must be equal to 5 because range = high-low, so $x^2 - 1 = 4$, $x^2 = 5$, $x = \sqrt{5}$ = between 2 and 3. 2+ > 2, so **CHOICE A**.

List L: $[1, \sqrt{2}, x, x^2]$ → $x > 0$ → must be positive.

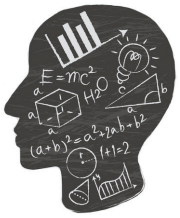
Range = High − Low = 4

$[x^2 - 1 = 4] + 1$

$[x^2 = 5] \sqrt{\ }$

$x = \sqrt{5} > 2$

A



8) One of the roots of the equation $x^2 + kx - 6 = 0$ is 3, and k is a constant.

Quantity A	Quantity B
The value of *k*	**-1**

A. Quantity A is greater.
B. Quantity B is greater.
C. The two quantities are equal.
D. The relationship cannot be determined from the information given.

EXPLANATION: A "root" of an equation is a number that makes the equation true. So substituting 3 for x results in: $3^2 + 3k - 6 = 0$. Solving for k results in: $9 + 3k - 6 = 0$. $3k = -3$. $k = -1$, so the answer is **CHOICE C**

$x^2 + kx - 6 = 0$

3 is a root, which means that inputting 3 should output zero.

In other words, $(x-3)(\text{something}) = x^2+kx-6$

$x^2 + kx - 6 = (x-3)(x+2) =$

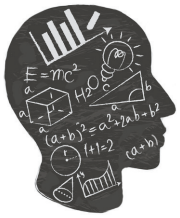
$x^2 + 2x - 3x - 6 =$

$x^2 - x - 6 =$

$x^2 + kx - 6$

so $k = -1$

C



9) If x and y are the tens digit and the units digit, respectively, of the product 725,278 x 67,066, what is the value of $x + y$?

A. 12
B. 10
C. 8
D. 6
E. 4

EXPLANATION: The trick here is to realize that for the last two digits of a large product, all we have to test is the last two digits of each number being multiplied. 725,278 x 67,066 is too big of a number for the GRE calculator to give you a precise answer, so instead, try 78 x 66, which equals 5148. The last two digits x and y are 4 and 8, so the value of $x + y = 4 + 8 = 12$, **CHOICE A**.

slope-intercept form: $y = mx + b$

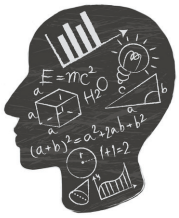
m ↓ slope b ↓ y-intercept

$3x - 2y = 8$

$[3x - 8 = 2y] \div 2$

$y = \frac{3}{2}x - 4$

D



10) In the *xy*-plane, what is the slope of the line whose equation is $3x - 2y = 8$?

A. -4
B. - 8/3
C. 2/3
D. 3/2
E. 2

EXPLANATION: You're going to want to take a time machine back to 9th grade and remind yourself of the standard equation of a line, $y = mx + b$. m = slope and b = y-intercept.

$3x - 2y = 8$, $2y = 3x - 8$, $y = (3/2)x - (8/3)$ so $m = 3/2$. **CHOICE D**.

11) If p is a negative number and $0 < s < |p|$, which of the following must also be a negative number?

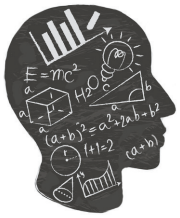
A. $(p + s)^2$
B. $(p - s)^2$
C. $(s - p)^2$
D. $p^2 - s^2$
E. $s^2 - p^2$

EXPLANATION: First of all, any number written in the form x^2 has to be positive. Hence, you can cross off A, B and C right away, and we're down to D and E.

When absolute value is involved, everything becomes positive, so it's sometimes helpful to discuss the magnitudes of numbers instead of just "greater than, less than." For example, -4 is less than 2, but -4 has a greater magnitude (positive 4) since, like absolute value, there is no such thing as a negative magnitude. So p is less than s, because s is greater than zero and thus positive, and p is negative. But the magnitude of p is greater than s.

So, if the magnitude of p is greater than that of x, then p^2 will always be greater than x^2, because numbers taken to even powers are always positive. **CHOICE E**.

If you're confused by the concept, then just **MAKE IT TRUE** by inserting real numbers (such as $s = 2$ and $p = -4$) and use process of elimination.



12)

10, 10, 10, 10, 8, 8, 8, 8, 12, 12, 11, y

The twelve numbers shown represent the ages, in years, of the 12 houses on a certain block. What is the median age, in years, of the twelve houses on the block?

_____ years

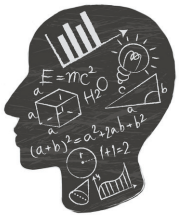
EXPLANATION: In order to calculate median (the middle term / average of the middle terms), you must first put the numbers in chronological order. For now, we will leave y out because we don't know its value. 8,8,8,8,10,10,10,10,11,12,12. OK, that's 11 numbers right there, and as it stands, 10 is the obvious median (5 numbers on the left, 5 numbers on the right).

If you draw those numbers out and circle the median, you will see that the 10 that is circled also has 10s to the right and left of it. No matter what value of *y* is, it cannot shift the median to the left or the right by more than one spot. Hence, the answer is **10**.

13) Of the 750 participants in a professional meeting, 450 are female and ½ of the female and ¼ of the male participants are less than thirty years old. If one of the participants will be randomly selected to receive a prize, what is the probability that the person selected will be less than thirty years old?

A. ⅛
B. ⅓
C. ⅜
D. ⅖
E. ¾

EXPLANATION: If there are 750 participants and 450 are female, then 300 must be male. "Of" = multiply. If ½ of the female participants are less than 30, then ½ of 450= 225 of the female participants are less than 30. If ¼ of the male participants are less than 30, than ¼ of 300 = 75. Probability = total number of desired outcomes / total number of possible outcomes = (225 + 75) / 750 = 300/750 = .4 = ⅖. **CHOICE D**.

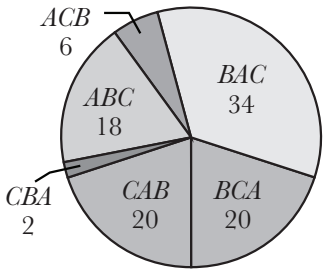


Questions 14-16 are based on the following data.

14) In a survey, 100 travel agents each ranked Airlines A, B, and C in order of preference. Each of the 100 travel agents also rated the three airlines in five categories on a scale of 1 through 10, with 10 being the best rating.

The sum of the five average ratings was calculated for each of the three airlines. The airline with the least sum was ranked 1st by what fraction of the travel agents?

DISTRIBUTION OF RANKINGS



NOTE:
The notatation ACB means *A* ranked 1st, *C* ranked 2nd, and *B* ranked 3rd.

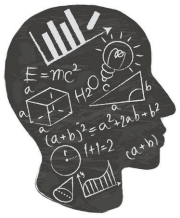
AVERAGE RATING

Category	Airline *A*	*B*	*C*
Convenience	5.1	8.0	4.3
Friendliness	5.0	5.5	5.4
Price	5.0	6.4	3.5
Promptness	6.5	6.9	4.1
Reliability	7.8	7.5	4.9

$$\frac{\square}{\square}$$

EXPLANATION: When you're dealing with lots of numbers and tables, make sure you use estimation instead of reaching directly for the on-screen calculator. Lots of students will begin this question by adding up the totals for airlines A, B, and C, but a quick glance at the table on the right is enough to tell us that airline C is in fact the airline with the least sum.

Next, we can look at the circle graph to see how many agents ranked airline C first. 20+2 = 22. Total number of travel agents (no need to calculate — it's provided in the question) is 100. **Answer: 22/100**.



15) Airline B's average rating for convenience was approximately what percent greater than Airline A's average rating for convenience?

A. 30%
B. 36%
C. 40%
D. 57%
E. 64%

EXPLANATION: Airline B's rating for convenience was 8.0. Airline A's rating for convenience was 5.1.

Now the tricky part, to figure out what percent greater than 5.1 is 8.0. For this we use the percent change equation: (difference/original) x 100. It's important to define "original" as "the number being compared to," or (perhaps more simply) "the number that comes after the word "than."

Difference = 8-5.1 = 2.9. Original = 5.1. D/O = 2.9/5.1 = .57, .57 x 100 = 57%. **CHOICE D**.

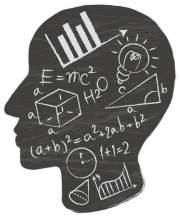
$$\text{Percent change} = \left(\frac{\text{difference}}{\text{original}}\right)(100)$$

$$= \left(\frac{8-5.1}{5.1}\right)(100)$$

$$= \left(\frac{2.9}{5.1}\right)(100) = 56.9\%$$

"approximately"

D



16) If each of the average ratings was the arithmetic mean of the ratings given l 100 travel agents, approximately how much greater was the total of the ratii given to all three airlines for reliability than that for promptness?

A. 25
B. 50
C. 125
D. 250
E. 500

EXPLANATION: The question tells us that the averages were calculated using 100 travel agents. Again, average = total / # of things, so just multiply the averages by the number of travel agents (100) to get the totals of the ratings.

Reliability = 7.8(100) + 7.5(100) + 4.9(100) = 780 + 750 + 490 = 2,020
Promptness = 6.5(100) + 6.9(100) + 4.1(100) = 650 + 690 + 410 = 1750

2,020-1,750 = 270. Notice that the question says "approximately." **CHOICE D** is correct.

$$\text{Average} = \frac{\text{total}}{\#\text{ of things}}$$

$$\text{Reliability} = 7.8 + 7.5 + 4.9 = \frac{\text{total}}{100}$$

$$\left[20.2 = \frac{\text{total}}{100}\right] \cdot 100$$

$$2020 = \text{total}$$

$$\text{Promptness} = 6.5 + 6.9 + 4.1 = \frac{\text{total}}{100}$$

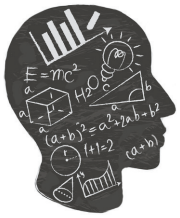
$$\left[17.5 = \frac{\text{total}}{100}\right] \cdot 100$$

$$1750 = \text{total}$$

$$\begin{array}{r} 2{,}020 \\ -\ 1{,}750 \\ \hline 270 \end{array}$$

"approximately"

D



17 A developer has land that has x feet of lake frontage. The land is to be subdivided into lots, each of which is to have either 80 feet or 100 feet of lake frontage. If 1/9 of the lots are to have 80 feet of frontage each and the remaining 40 lots are to have 100 feet of frontage each, what is the value of x?

A. 400
B. 3,200
C. 3,700
D. 4,400
E. 4,760

EXPLANATION: The key phrase here is "1/9 of the lots are to have 80 feet of frontage each and the remaining 40 lots…," which tells you that 40 lots = 8/9 of the lots. From that, (8/9)x = 40, x = 45, so there are 45 lots total. 1/9 of 45 is 5, so (5 lots) x 80 feet/lot = 400 feet. The remaining 40 lots are 100 feet each. Repeat the same process, no units necessary this time. 40 x 100 = 4000. Add them together. 400 + 4,000 = 4,400. **CHOICE D** is correct.

$$\left[40 \text{ lots} = \frac{8}{9}(\#\text{ lots})\right] \cdot 9$$

$$\left[360 \text{ lots} = 8\ (\#\text{ lots})\right] \div 8$$

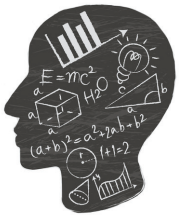
$$45 \text{ lots} = \#\text{ of lots}$$

multiply!

$$\frac{1}{9} \text{ of } 45 = \frac{1}{9} \cdot \frac{45}{1} = (5 \text{ lots})\left(\frac{80 \text{ ft}}{\text{lot}}\right) = 400 \text{ feet}$$

$$\frac{8}{9} \text{ of } 45 = \left(\frac{40 \text{ lots}}{1}\right)\left(\frac{100 \text{ ft}}{\text{lot}}\right) = 4{,}000 \text{ feet}$$

$$\begin{array}{r} 4000 \\ +\ 400 \\ \hline 4{,}400 \end{array}$$ D



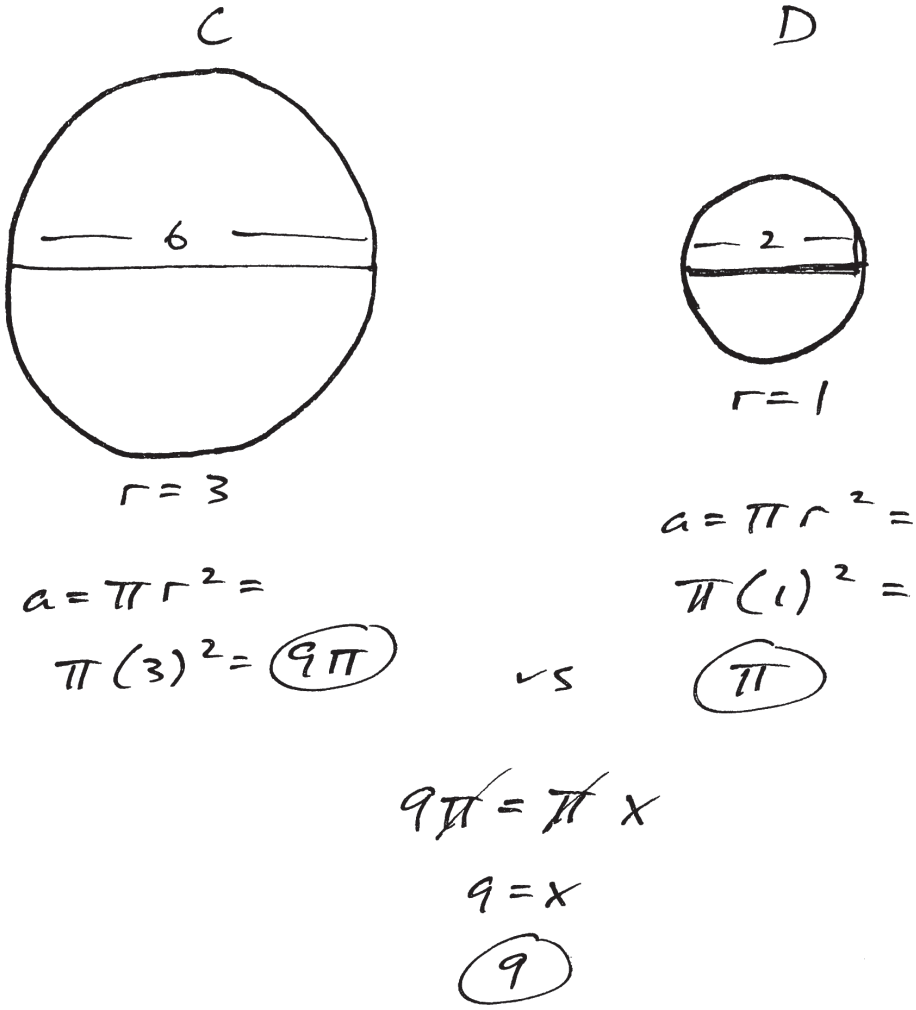
18) If the diameter of circle C is 3 times the diameter of circle D, then the area of circle C is how many times the area of circle D ?

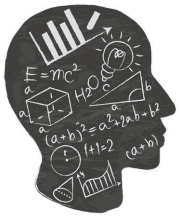
EXPLANATION: It's easy enough to just "make this true" (a favorite catchphrase of mine on the Quant section) by simply picking numbers that work (show).

Circle C = Diameter 6 = Radius 3. Area = $\pi r^2 = \pi(3)^2 = 9\pi$
Circle D = Diameter 2 = Radius 1. Area = $\pi r^2 = \pi(1)^2 = \pi$

So the area of circle C (9π) is **9** times greater than that of Circle D.

But if you're confident in your math principles, then you can also do this one in your head. Diameter is directly proportional to radius, so the radius of circle C is also 3 times that of Circle D. However, area is always in square units, unlike diameter and radius. So if the radius is 3 times more, than the area of circle C is 3^2 – 9 times that of circle D.





19) Last year Kate spent between ¼ and ⅓ of her gross income on her mortgage payments. If Kate spent $13,470 on her mortgage payments last year, which of the following could have been her gross income last year?

Indicate *all* such gross incomes.

A. $40,200
B. $43,350
C. $47,256
D. $51,996
E. $53,808

EXPLANATION: This one's easy. We just have to calculate ¼ of x = $13,470 and ⅓ of x = $13,470. The correct answers are anything that lies between.

Remember that "of" means "multiply." ¼ x = $13,470, x = $53,880.

⅓ x = $13,470 , x = $40,410.

The answers between $40,410 and $53,880 are **CHOICES B,C,D,** and **E**.

Or try it this way:

$$\left[\frac{1}{4}g < k < \frac{1}{3}g\right] \cdot 12$$

$$3g < 12k < 4g$$

$$3g < 12(13{,}470) < 4g$$

$$[3g < [161{,}640] < 4g]$$ break into 2 separate inequalities.

$$[3g < 161{,}640] \div 3$$

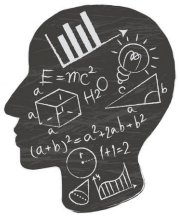
$$g < 53{,}880$$

$$[161{,}640 < 4g] \div 4$$

$$40{,}410 < g$$

combined: $40{,}410 < g < 53{,}880$

B, C, D, E



20) The quantities S and T are positive and are related by the equation $S=K/T$ where k is a constant. If the value of S increases by 50 percent, then the value of T decreases by what percent?

A. 25%
B. 33 and ⅓%
C. 50%
D. 66 and ⅓%
E. 75%

EXPLANATION: Obviously, don't just assume that the answer is C. Test it. *S = k / T. Make it true.* 5 = 15/3 so *k* = 15. 1.5 (5) = 15/*x*, 7.5*x* = 15, *x* = 2. *X went from 3 to 2 which is a 33% decrease. % change = (difference / original)* x 100 = ((3 – 2) /3) x 100 = (1/3) x (100) = 33% (**CHOICE B**).

Or, try it this way:

S, T = pos. k = constant

MAKE IT TRUE: pick one value for k and two values for S_1 and S_2 that are 50 percent apart.

$S = \frac{k}{t}$ 10 to 15 = 50% increase

so $S_1 = 10$, $10 = \frac{k}{t}$, $10 = \frac{30}{t}$, $t = 3$

$S_2 = 15$, $15 = \frac{k}{t}$, $15 = \frac{30}{t}$, $t = 2$

$k = 30$

T increases by what percent?

3 to 2 $\Rightarrow \left(\frac{\text{difference}}{\text{original}}\right)(100) = \left(\frac{3-2}{3}\right)(100) = \frac{1}{3}(100) = 33.3\%$

| **NOTES**