



Question 1

— Quantitative

$$(2x + 3y)(4x + 5y) =$$

Answer choices:

- $8x^2 + 22xy$
- $8x^2 + 15y^2$
- $8x^2 + 10xy + 15y^2$
- $8x^2 + 12xy + 15y^2$
- $8x^2 + 22xy + 15y^2$

Explanation

$$(2x + 3y)(4x + 5y) = 8x^2 + 10xy + 12xy + 15y^2 = 8x^2 + 22xy + 15y^2$$



Question 2

— Quantitative

A computer store is having a sale and all computers will be sold for 12 percent off the retail price. If the retail price of a computer is \$1500.00, what is the sale price?

Answer choices:

- \$180.00
- \$300.00
- \$1000.00
- \$1200.00
- \$1320.00

Explanation

The sale price of the computer is 12 percent off the retail price and 12 percent of \$1500.00 is $(0.12)(\$1500.00) = \180.00 . The sale price is then $\$1500.00 - \$180.00 = \$1320.00$.



Question 3

— Quantitative

If $3x + 9y = 7x + y$, then $8y =$

Answer choices:

- $4x$
- $6x$
- $8x$
- $10x$
- $12x$

Explanation

$$\begin{aligned}3x + 9y &= 7x + y \\3x + 9y - y &= 7x + y - y \\3x + 8y &= 7x \\-3x + 3x + 8y &= -3x + 7x \\8y &= 4x\end{aligned}$$



Question 4

— Quantitative

A line in the xy -plane has slope $-\frac{2}{3}$ and contains the points $(2,y)$ and $(5,4)$. What is the value of y ?

Answer choices:

- 6
- 3
- 2
- 1
- 2

Explanation

The slope of a line in the xy -plane is given by the change in the y -coordinates divided by the change in the x -coordinates.

$$y - 4 = -\frac{2}{3}(5 - 2)$$

$$y - 4 = -\frac{2}{3}(-3) = 2$$

$$y = 6$$



Question 5

— Quantitative

A box contains 10 blue, 9 red and 6 yellow identically shaped blocks. If one block is selected at random, what is the probability that the block selected will NOT be blue?

Answer choices:

- $\frac{6}{25}$
- $\frac{9}{25}$
- $\frac{10}{25}$
- $\frac{15}{25}$
- 1

Explanation

If all outcomes are equally likely then the probability that event E will occur is

$$P(E) = \frac{\text{number of favorable outcomes}}{\text{total number of outcomes}}$$

There are a total $10 + 9 + 6 = 25$ blocks. There are $9 + 6 = 15$ blocks that are not blue. Therefore, the probability that the block selected is not blue will be $\frac{15}{25}$.



Question 6

— Verbal

Questions 6 and 7 are based on this passage.

Despite the extravagant colors of the flowers bees visit, until the early 1900s it was commonly thought that bees were entirely color-blind. To test this, zoologist Karl von Frisch set out an array of dishes on cards. The dish on one card, the only blue card among varying grays, contained sugar water. Once bees learned to visit this card and dish combination, he varied its position in the matrix. Next, he replaced all the cards and dishes with a new set of identical materials, only now leaving the blue card's dish empty. The bees nonetheless returned to the blue card. If their vision were monochromatic, they would likely have found at least some of the gray cards indistinguishable from the blue.

Answer choices:

The author of the passage refers to “extravagant colors” primarily to

- validate a view about bees’ color vision that was once commonly accepted
- suggest why it might be surprising that bees were thought to be color-blind
- complicate the debate about bees’ color vision
- point out a reason for bees’ visual limitations
- anticipate an objection to the methodology of the experiment described in the passage

Explanation

By using “despite” and emphasizing the “extravagant colors” of the flowers that bees visit, the first sentence of the passage frames the once-common notion that bees were color-blind as counterintuitive. This points to **Choice 2**, which mentions surprise at the notion that bees were color-blind, as the correct answer choice.



Question 7

— Verbal

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Answer choices:

It can be inferred from the passage that by setting out new cards when replacing the dish of sugar water with an empty one, Frisch

- was able to record accurately any changes in color that resulted from spills or drops
- could subtly alter the color of the card on which the sugar water was placed in each iteration of the experiment
- introduced new clues relevant to finding the sugar water's location
- succeeded in proving that bees see in only a limited spectrum of color
- was able to rule out the possibility that the bees had somehow marked the blue card in previous trials

Explanation

This question asks about Frisch's purpose in setting out new cards during the experiment, the overarching goal of which was to test the hypothesis that bees were "entirely color-blind." Since the bees had visited the blue card earlier, they could have marked it in some way. To ensure that the experiment was testing the bees' perception of color only, Frisch needed to eliminate the possibility that they were relying on non-visual markers to help them locate the blue card's dish. This makes **Choice 5** the correct answer choice.



Question 8

— Verbal

For each blank, select one entry from the corresponding column of choices.
Fill all blanks in the way that best completes the text.

The impersonality of so much of Sontag's writings naturally leaves us wondering whether a different kind of writer will be revealed in her journals and notebooks, whether we will find there writing that is more (i)_____ and less (ii)_____.

Answer choices:

Blank (i)

intimate

dispassionate

contentious

Blank (ii)

subjective

guarded

idiosyncratic

Explanation

In journals and notebooks, writers can record private thoughts, so these writings might differ considerably from an author's published work. Since Sontag's public writings are generally characterized by their "impersonality," we might wonder whether the journals and notebooks are the opposite: that is, more personal, or "intimate," and less cautious or "guarded" about revealing the author's inner life.

Thus the correct answer is **intimate** and **guarded**.



Question 9

— Verbal

For each blank, select one entry from the corresponding column of choices. Fill all blanks in the way that best completes the text.

At a recent conference on ancient DNA, one presentation opened with the claim that the field was now mature and could move ahead with confidence. This (i) _____ is (ii) _____, as demonstrated at the conference by the many presentations that notably lacked an adequate methodology for ensuring that DNA was uncontaminated by material that is more recent. In fact, ancient DNA research presents extreme technical difficulties, in part precisely because of the (iii) _____ of surviving DNA.

Answer choices:

Blank (i)

- concern
- optimism
- diffidence

Blank (ii)

- infectious
- unfounded
- unusual

Blank (iii)

- corrupted nature
- straightforward makeup
- copious amounts

Explanation

The first sentence refers to the claim that the field of ancient DNA study is mature and ready to advance with certainty. The only answer choice for the first blank that conveys such a positive outlook is “optimism.” The reference in the second sentence to the lack of an adequate methodology to ensure that ancient DNA remained uncontaminated strongly suggests that this optimism was unwarranted or “unfounded,” which is the only answer choice for the second blank that conveys a lack of justification. The third and final sentence reinforces the point of the second by ascribing the extremely challenging character of ancient DNA research to the impure or “corrupted nature” of available genetic material.

Thus the correct answer is **optimism, unfounded** and **corrupted nature**.



Question 10

— Verbal

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.

Victorian women endured constricting expectations, yet against that their era did feature a number of social and political movements that _____ women's participation in the public realm.

Answer choices:

- thwarted
- ridiculed
- confounded
- encouraged
- fostered

Explanation

The phrase “yet against that” suggests the Victorian era featured movements opposing the “constricting expectations” mentioned. This countervailing trend would include movements that promoted — that is, “encouraged” and “fostered” — women’s participation.

Thus the correct answer is **encouraged** (Choice 4) and **fostered** (Choice 5).