

Et Cetera Drill

Here are some math questions to practice on. Remember to check your answers when you finish. You can find the answers in Part V.

1 of 10

A bowl contains 15 marbles, all of which are either red or blue. If the number of red marbles is one more than the number of blue marbles, what is the probability that a marble selected at random is blue?

- $\frac{1}{15}$
- $\frac{2}{15}$
- $\frac{7}{15}$
- $\frac{1}{2}$
- $\frac{8}{15}$

2 of 10

If $\forall(x) = 10x - 1$, what is $\forall(5) - \forall(3)$?

- 15
- 18
- 19
- 20
- 46

3 of 10

For all positive integer values of x , $\#x = 2^{-x}$.

Quantity A

#8

Quantity B

#4

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

4 of 10

At a recent dog show, there were 5 finalists. One of the finalists was awarded “Best in Show” and another finalist was awarded “Honorable Mention.” In how many ways could the two awards be given out?

Click on the answer box and type in a number.
Backspace to erase.

5 of 10

Company X budgets \$90,000 total on advertising for all of its products per year. Company X budgets \$40,000 for all advertising for product A and \$30,000 for all advertising for product B . From the budgets for products A and B , \$15,000 is budgeted for advertisements that feature both products used as a system.

Quantity A

Quantity B

The total amount Company X budgets for advertising products other than products A and B

\$20,000

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

6 of 10

Lee randomly selects a 2-digit prime number less than 50. What is the probability that the tens digit is greater than the units digit?

- $\frac{3}{14}$
- $\frac{3}{11}$
- $\frac{3}{8}$
- $\frac{1}{2}$
- $\frac{8}{11}$

7 of 10

An elected official wants to take five members of his staff to an undisclosed secure location. What is the minimum number of staff members the elected official must employ in order to have at least 20 different groups that could be taken to the location?

- 7
- 8
- 9
- 10
- 11

8 of 10

For all real numbers x and y , if $x \# y = x(x - y)$, then $x \# (x \# y) =$

- $x^2 - xy$
- $x^2 - 2xy$
- $x^3 - x^2 - xy$
- $x^3 - (xy)^2$
- $x^2 - x^3 + x^2y$

9 of 10

A jar contains 12 marbles. Each is either yellow or green and there are twice as many yellow marbles as green marbles. If two marbles are to be selected from the jar at random, what is the probability that exactly one of each color is selected?

- $\frac{8}{33}$
- $\frac{16}{33}$
- $\frac{1}{2}$
- $\frac{17}{33}$
- $\frac{25}{33}$

10 of 10

A set of 10 points lies in a plane such that no three points are collinear.

Quantity A

The number of distinct triangles that can be created from the set

Quantity B

The number of distinct quadrilaterals that can be created from the set

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