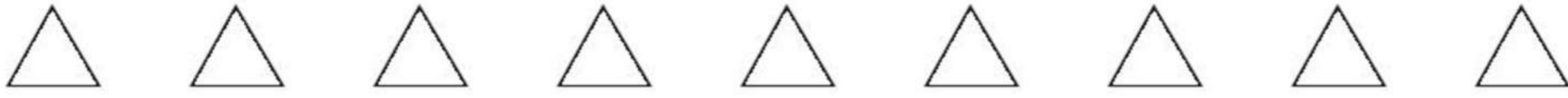


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13. When $y = x$ and $x + y = 10$ are graphed in the standard (x, y) coordinate plane, at what point do they intersect?

- A. $(-5, 5)$
 - B. $(0, 10)$
 - C. $(5, -5)$
 - D. $(5, 5)$**
 - E. $(10, 0)$
- $\times (4, 4)$

DO YOUR FIGURING HERE.

14. The first 4 terms of a geometric sequence are listed in order below. What is the seventh term of the sequence?

$24, 12, 6, 3, \frac{3}{2}$ $\rightarrow \div 2$

- F. -6
- G. 0
- H. 0.1875
- J. 0.375**
- K. 0.75

$\frac{3}{4}, \left(\frac{3}{8}\right) \times \frac{1}{2}$
 $\frac{3}{2^3} = \frac{3}{8}$

15. Let s be any real number such that $4 < \sqrt{s} < 9$. Which of the following is a possible value of s ?

- ~~A. 2.5~~ $\sqrt{2.5} = 1.41 \dots$
- ~~B. 7.6~~ $\sqrt{7.6} = 2.76$
- C. 12.7
- D. 39.3** $\sqrt{39.3} = 6.2$
- E. 82.4

$4^2 < s < 9^2$
 $16 < s < 81$

16. In the standard (x, y) coordinate plane, which of the following lines goes through $(0, 2)$ and is parallel to $y = -5x + 7$?

- ~~F. $y = -5x - 2$~~ $-5(0) - 2 = -2$
- G. $y = -5x + 2$** $-5(0) + 2 = 2$
- ~~H. $y = \frac{1}{5}x - 2$~~
- ~~J. $y = \frac{1}{5}x + 2$~~
- ~~K. $y = 2x + 7$~~

$y = mx + b$
 slope \uparrow
 y-int \leftarrow

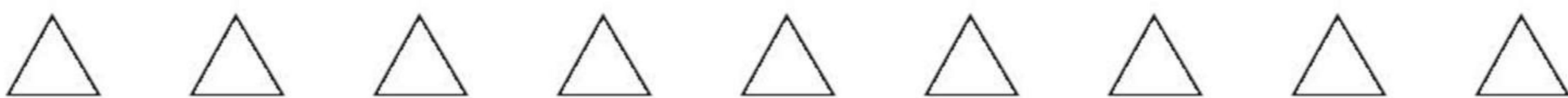
17. What is the slope of the line in the standard (x, y) coordinate plane that contains the points $(6, -1)$ and $(4, 3)$?

- A. -2**
- B. -1
- C. $-\frac{1}{2}$
- D. $\frac{1}{5}$
- E. 5

$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-1 - 3}{6 - 4} = -2$

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18. If $8y = 3x - 5$, then $x = ?$

DO YOUR FIGURING HERE.

F. $y + 5$

G. $\frac{8}{3}y - 5$

H. $\frac{8}{3}y + 5$

J. $\frac{8y - 5}{3}$

K. $\frac{8y + 5}{3}$ ✓

$8y + 5 = 3x$
 $\frac{8y + 5}{3} = x$

19. A tank has a capacity of 30 gallons and is $\frac{5}{6}$ full of water. Jamal then removes $\frac{1}{8}$ of the water in the tank. How many gallons of water are left in the tank?

~~A.~~ $3\frac{1}{8}$

B. 5

C. $17\frac{1}{7}$

D. $21\frac{7}{8}$

E. $26\frac{7}{8}$

full = $\frac{5}{6} \times 30 = 25$
 remove = $25 - \frac{1}{8}(25)$
 $= 21\frac{7}{8}$

20. Which of the following expressions is equivalent to $3(a + b) - 5(a - 2b)$?

F. $-2a - 9b$

G. $-2a - 7b$

H. $-2a - b$

J. $-2a + 5b$

K. $-2a + 13b$

$3b + 10b = 13b$

21. An English teacher decided to give a second test over the same material as a first test. To reward those students who did well and to provide an incentive to students to improve their score, he announced that he would calculate the combined test score by starting with the first test score and adding $\frac{2}{3}$ of the increase in test score from their first test to their second test. Trish scored 57 points on her first test and 72 points on her second test. What is her combined test score?

A. 62

B. 67

C. 72

D. 82

E. 95

inc = $72 - 57 = 15$
 $57 + \frac{2}{3}(15) = 67$

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