

1. When $x = \frac{1}{2}$, what is the value of $\frac{10x-3}{x}$?

- A. 0
- B. $\frac{1}{2}$
- C. 2
- D. $\frac{5}{2}$
- E. 4

2. What is the value of the expression below?

$$| -9 + 3 | - | 4 - 5 |$$

- A. 5
- B. 6
- C. 7
- D. 11
- E. 13

4. $\frac{6}{\sqrt{3}} + \frac{1}{\sqrt{2}} = ?$

- A. $\frac{6\sqrt{2} + \sqrt{3}}{\sqrt{5}}$
- B. $\frac{6\sqrt{2} + \sqrt{3}}{\sqrt{6}}$
- C. $\frac{7}{\sqrt{5}}$
- D. $\frac{7}{\sqrt{6}}$
- E. $\frac{6}{\sqrt{6}}$

5. What is the value of $\log_2 32$?

- A. 3
- B. 4
- C. 5
- D. 6
- E. 7

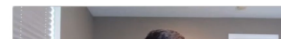
6. Express $(2 + i)^2$ in simplest form.

- A. 3
- B. $4 + i$
- C. $4 - i$
- D. $3 + 4i$
- E. $5 + 4i$

7. Express i^{64} in simplest form.

- A. -1
- B. 0
- C. 1
- D. $-i$
- E. i

8. Pedro owns two sporting goods stores (X and Y), he sells three different kinds of hockey sticks (A, B, and C) in each store. The numbers in the matrices show the number of hockey sticks sold in the stores and the cost of each stick. What was the total revenue raised from selling the hockey sticks?



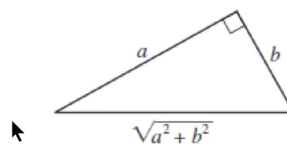
	A	B	C	Cost	◇
X	3	5	11	A	\$40
Y	2	4	8	B	\$65
				C	\$120

- A. 3065
 B. 3650
 C. 4280
 D. 4820
 E. The answer cannot be determined

9. $2 \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix} + 4 \begin{bmatrix} 0 & -2 \\ -3 & 3 \end{bmatrix} = ?$

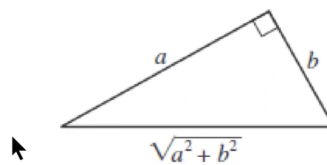
11. In the right triangle below, $0 < a < b$. One of the following angle measures in the triangle is $\tan^{-1}\left(\frac{a}{b}\right)$. What is $\sin\left[\tan^{-1}\left(\frac{a}{b}\right)\right]$?

- A. $\frac{a}{b}$
 B. $\frac{b}{a}$
 C. $\frac{a}{\sqrt{a^2+b^2}}$
 D. $\frac{b}{\sqrt{a^2+b^2}}$
 E. $\frac{\sqrt{a^2+b^2}}{a}$



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12. If $x^2 - 32x = -192$, what is a possible value for x ?

- A. -512
- B. -192
- C. -36
- D. 24
- E. 216