Alg 2 Bellwork Fri. 12-20-19

PSAT 10 PRACTICE

NO CALCULATOR IS ALLOWED ON THESE QUESTIONS.

These 9 questions should take about 14 minutes since they come from a section that allots 25 minutes for 17 questions.



**1**

Normal body temperature for an adult is between 97.8°F and 99°F, inclusive. If Kevin, an adult male, has a body temperature that is considered to be normal, which of the following could be his body temperature?

A) 96.7°F

B) 97.6°F

C) 97.9°F

D) 99.7°F

**2**

A home builder purchased $n$ pieces of lumber for a construction project. The type of lumber purchased cost $3.77 per piece. If the builder was charged a onetime delivery fee of $65, which of the following represents the total cost $C$, in dollars, for the purchase and delivery of the lumber?

A) $C = 3.77n$

B) $C = 68.77n$

C) $C = 65n + 3.77$

D) $C = 3.77n + 65$

**3**

$$6m = 4m + 18$$

What value of $m$ satisfies the equation above?

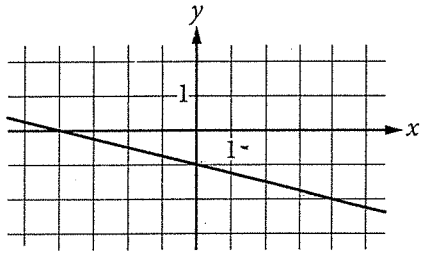
A) 1.8

B) 3

C) 9

D) 16

**4**




Which of the following is an equation of the graph shown in the $xy$-plane above?

A) $y = -\frac{1}{4}x - 1$

B) $y = -x - 4$

C) $y = -x - \frac{1}{4}$

D) $y = -4x - 1$





CONTINUE



**5**

Which of the following is equivalent to the expression $x^4 - x^2 - 6$ ?

A) $(x^2 + 1)(x^2 - 6)$

B) $(x^2 + 2)(x^2 - 3)$

C) $(x^2 + 3)(x^2 - 2)$

D) $(x^2 + 6)(x^2 - 1)$

**6**

$$8x^2(-4x^5 + 3x + 1) + 2x^2$$

Which of the following is equivalent to the expression above?

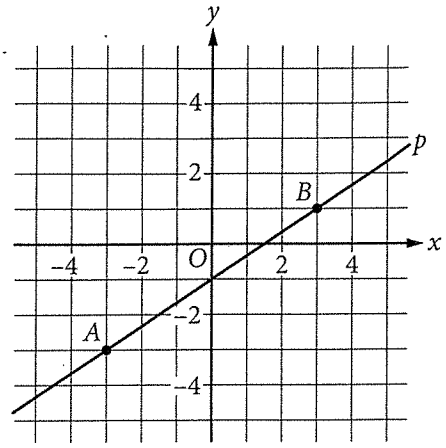
A) $-32x^{10} + 34x^2$

B) $-32x^{10} + 26x^2 + 1$

C) $-32x^7 + 24x^3 + 10x^2$

D) $-32x^7 + 24x^3 + 16x^4 + 8x^2$

**7**




Line $p$ in the $xy$-plane above passes through points $A$ and $B$. Line $\ell$ (not shown) has equation $y = ax + 6$ and has the same slope as line $p$. What is the value of $a$ ?

A) $\frac{3}{2}$

B) $\frac{2}{3}$

C) $-\frac{2}{3}$

D) $-\frac{3}{2}$







CONTINUE

8

| $x$ | $f(x)$ |
|---|---|
| 0 | 5 |
| 1 | $\frac{5}{2}$ |
| 2 | $\frac{5}{4}$ |
| 3 | $\frac{5}{8}$ |

The table above gives the values of the function $f$ for some values of $x$. Which of the following equations could define $f$ ?

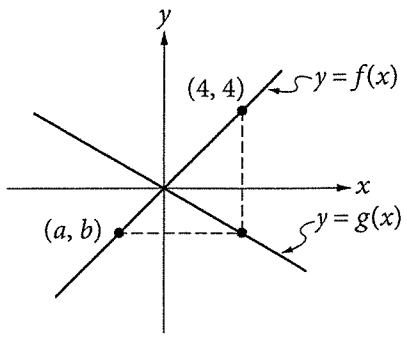
A) $f(x) = 5\left(2^{x+1}\right)$

B) $f(x) = 5\left(2^{x}\right)$

C) $f(x) = 5\left(2^{-(x+1)}\right)$

D) $f(x) = 5\left(2^{-x}\right)$

9




The graphs of the functions $f$ and $g$, defined by $f(x) = x$ and $g(x) = -\frac{1}{2}x$, are shown in the $xy$-plane above. If the vertical dashed line is parallel to the $y$-axis and the horizontal dashed line is parallel to the $x$-axis, what is the value of $a + b$ ?

A) $-4$

B) $-2$

C) 2

D) 4





CONTINUE

# BELLWORK ANSWERS

12-20-19

1. C
2. D
3. C
4. A
5. B
6. C
7. B
8. D
9. A