

## SAT Practice

02-13-2018

## SAT Think Pair Share Instructions

- You have **90 seconds** to **independently** think about each questions
- Answer the questions in **bellwork/SAT prep** of your notebook.
- You DO NOT have to write down the question, just your answer (Ppt will be on the blog)
- After the **timer is up**, **share** your answer with your elbow partner. If you did not have the same answer, you should try to convince each other before you **share your white board answer with the class**.
- Numbers will be picked randomly for students to come up on the board and share **their work/Thinking Process** with the class.

## SAT Practice Question 1 **NC**

Which of the following equations represents a line that is parallel to the line with equation  $y = -2x - 6$ ?

- $ax + by = c$
- A.)  $4x - 2y = 6$
- B.)  $2x - y = 5$   $\frac{-2}{-1} = 2$   $100\%$
- C.)  $4x + 2y = 8$
- D.)  $x + 2y = 4$   $-\frac{a}{b} = -\frac{4}{2} = -2$

## SAT Practice Question 2 **NC**

The line  $y = kx + 6$ , where  $k$  is a constant, is graphed in the  $xy$ -plane. If the line contains the point  $(f, g)$ , where  $f \neq 0$  and  $g \neq 0$ , what is the slope of the line in terms of  $f$  and  $g$ ?

- A.)  $\frac{6-f}{g}$
- B.)  $\frac{g-6}{f}$
- C.)  $\frac{f-6}{g}$
- D.)  $\frac{6-g}{f}$

$g = kf + 6$   
 $g - 6 = kf$   
 $\frac{g-6}{f} = k$

## SAT Practice Question 3 **NC**

If  $\frac{2}{5}x - \frac{1}{5}x = \frac{1}{3} + \frac{1}{2}$ , what is the value of  $x$ ?

$\frac{2}{5}x - \frac{1}{5}x = \frac{1}{3} + \frac{1}{2}$   
 $\frac{1}{5}x = \frac{2}{6} + \frac{3}{6}$   
 $\frac{1}{5}x = \frac{5}{6}$   
 $x = \frac{25}{6}$

## SAT Practice Question 4 **NC**

For  $i = \sqrt{-1}$ , what is the sum  $(9 + 6i) + (-12 + 8i)$ ?

- A.)  $-3 - 2i$
- B.)  $21 + 14i$
- C.)  $-3 + 14i$
- D.)  $21 - 2i$

$(9 + 6i) + (-12 + 8i)$   
 $-3 + 14i$

## SAT Practice Question 5 **NC**

$(2x^2y - 4y^2 + 6xy^2) - (-x^2y + 2xy^2 - 5y^2)$   
 Which of the following is equivalent to the expression above?

- A.)  $8x^2y^2$
- B.)  $3x^2y + y^2 + 4xy^2$
- C.)  $3x^2y - 9y^2 + 8xy^2$
- D.)  $-5x^2y^2 + y^2$

$2x^2y - 4y^2 + 6xy^2 + x^2y - 2xy^2 + 5y^2$

## SAT Practice Question 6 **NC**

If  $\frac{a}{b} = 4$ , what is the value of  $\frac{7b}{a}$ ?

- A.) 1.00
- B.) 1.25
- C.) 1.50
- D.) 1.75

$\frac{a}{b} = 4$   
 $\frac{7b}{a} = \frac{7}{4}$   
 $1.75$

## SAT Practice Question 7 **Calc**

If  $y = kx$ , where  $k$  is a constant, and  $y = 18$  when  $x = 6$ , what is the value of  $y$  when  $x = 2$ ?

- A.) 6
- B.) 12
- C.) 18
- D.) 32

$18 = 6k$   
 $3 = k$   
 $y = 3x$   
 $y = 6$  when  $x = 2$

SAT Practice Question 8 **Calc**

For what value of  $n$  is  $|n - 2| + 2$  equal to 0?

- A.) 0
- B.) 2
- C.) 4
- D.) There is no such value of  $n$ .

$|0-2|+2=0$   $|n-2|+2=0$   
 $2+2=0$  X  $|n-2|=-2$   
 $|2-2|+2=0$  X  $|n-2|=-2$

SAT Practice Question 9 **Calc**

Which of the following numbers is NOT a solution of the inequality  $21x + 4 > -4x + 58$ ?

- a.) 2.16
- b.) 2.17
- c.) 2.18
- d.) 2.19

$x > 2.16$

SAT Practice Question 10 **Calc**

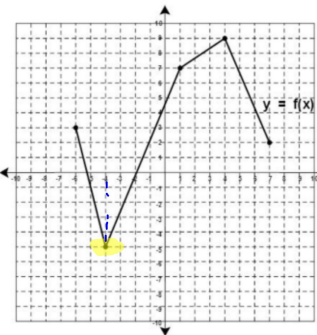
$h = -4.9t^2 + 25.4t$

The equation above expresses the approximate height  $h$ , in meters, of a ball  $t$  seconds after it is launched vertically upward from the ground with an initial velocity of 25.4 meters per second. After approximately how many seconds will the ball hit the ground?

- A.) 3.5
- B.) 4.0
- C.) 4.5
- D.) 5.0

$h=0$

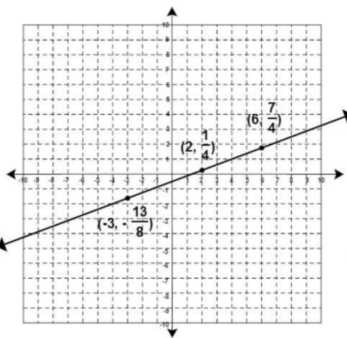
SAT Practice Question 11 **Calc**



The complete graph of the function  $f$  is shown in the  $xy$ -plane above. For what value of  $x$  is the value of  $f(x)$  at its minimum?

- A.) -6
- B.) -4
- C.) 7
- D.) 9

SAT Practice Question 12 **Calc**



$(-3, -\frac{13}{8})$   $(2, \frac{1}{4})$   $(6, \frac{7}{4})$

What is the slope of line  $t$ ?

$\frac{y_2 - y_1}{x_2 - x_1}$   
 $\frac{\frac{7}{4} - \frac{1}{4}}{6 - 2} = \frac{\frac{6}{4}}{4} = \frac{6}{4} \cdot \frac{1}{4} = \frac{3}{8}$

SAT Practice Question 13 **Calc**

$x$	$f(x)$
1	-6
3	0
5	6

Some values of the linear function  $f$  are shown in the table above. Which of the following defines  $f$ ?

- A.)  $f(x) = 2x - 9$
- B.)  $f(x) = 2x + 9$
- C.)  $f(x) = 3x + 9$
- D.)  $f(x) = 3x - 9$

SAT Practice Question 14 **Calc**

$\frac{1}{3}y = 6$   
 $x - \frac{1}{4}y = 2$

What is the value of  $x$ ?

- A.) 4
- B.) 5
- C.) 6.5
- D.) 7.5

SAT Practice Question 15 **Calc**

If  $\frac{3}{4}m = \frac{5}{8}$ , what is the value of  $m$ ?

- A.)  $\frac{5}{6}$
- B.)  $\frac{15}{32}$
- C.)  $\frac{6}{5}$
- D.)  $\frac{32}{15}$

