

## Lesson "1" SAT "1": Solving Equation

1) Which value of  $x$  makes the equation  $\frac{7}{5}(3x - 2) = 14$  true?

a) 2

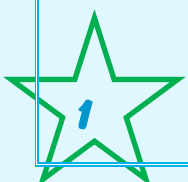
b) 3

c) 4

d) 5



SAT



2)  $(3x - 2)^2 - (x + 3)^2 = 0$  , what is the absolute value of the difference between the two roots of the above equation?

a)  $\frac{11}{4}$

b)  $\frac{9}{4}$

c)  $\frac{5}{3}$

d)  $\frac{11}{2}$



SAT

3)  $\frac{3y - 2(4 - 2y)}{3} = \frac{-11 + 3(2 + 3y)}{5}$  , What is the value of  $y$  in the equation above?

(Ans:  $\frac{25}{8}$ )



SAT

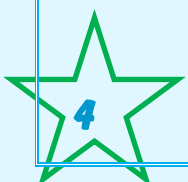
4) *What is the solution of the equation:*

$$x + 2(x + 1) + 3(x + 1) = 3(x - 1) - x + 24?$$

*(Ans: 4)*



SAT



5) If  $4t - 10 = 11a$  and  $a = -2$ , what is the value of  $10t - 10$ ?

a) -40

b) -8

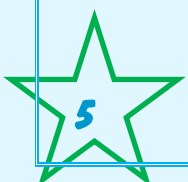
c) -3

d) 1

•



SAT



6)  $\frac{x}{x+2} - \frac{1}{2} = x - 2$  , What is the positive solution of the equation given above?

(Ans: 2)



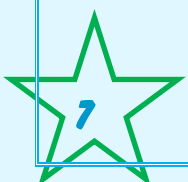
SAT

7) If  $2x - 3 = 0$  , what is the value of  $\frac{7}{3}x + \frac{1}{2}$  ?

(Ans: 4)



SAT



8) Which of the following is a solution for the equation

$$2x^2 - 7|x| + 5 = 0$$

a) 0

b) -1

c) 2

d) -3



SAT



9) If  $\frac{-1}{2x-1} = \sqrt{3}$ , what is the value of  $6x$ ?

a)  $-3\sqrt{3}$

b)  $\sqrt{3} - 3$

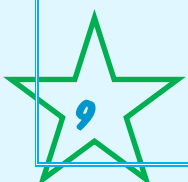
c)  $-\sqrt{3} + 3$

d)  $\sqrt{3} + 3$

•



SAT



10) If  $4x + 14y = -7$  , what is the value of  $-x - \frac{7}{2}y$ ?

a)  $-\frac{7}{4}$

b)  $\frac{7}{4}$

c)  $-\frac{7}{2}$

d)  $\frac{7}{2}$



SAT

11) If  $\frac{1}{2}y - \frac{3}{5}x = -6$  , What is the value of  $6x - 5y$ ?

(Ans: 60)



SAT

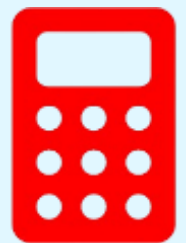
12)  $\frac{6(x - 1) + 4}{3} - \frac{3 - (5 - 4x)}{2} = 0$  , What is the value of  $x$  that satisfies the equation?

a)  $-\frac{2}{5}$

b)  $-\frac{3}{7}$

c) There is no value of  $x$  for which the equation is true

d) There are infinitely many values of  $x$  for which the equation is true



SAT

13) If  $\frac{2x-4}{3} - \frac{x+1}{6} = t+1$  and  $t=3$ , what is the value of  $x$ ?



a) 27

b) -1

c) 11  
•

d)  $\frac{31}{3}$

SAT

14) What is the solution of  $\frac{1}{x+1} - \frac{2}{3} = -\frac{2}{5}$ ?

a)  $\frac{9}{2}$

b)  $\frac{11}{4}$

c)  $-\frac{11}{5}$

d)  $-\frac{31}{16}$



SAT

***15) Allen needs \$10,000 to buy a new car. If he has \$2,000 saved in his bank account, sold this old car for \$3,200 and then started working as a cashier in a supermarket where he is paid \$5 for each hour, how many hours should he work in order to be able to buy the new car at the very least?***

***(Ans: 960)***



**SAT**

16) If  $(2c - 3)^2 - (2c - 5)^2 = -12$  , what is the value of  $c$ ?

(Ans:  $\frac{1}{2}$  or 0.5)



SAT