

PSAT Practice Sheet –

Directions: For each problem, show all necessary work and circle your solution. NO WORK = NO CREDIT.

1.) $\sqrt{k+2} - x = 0$

In the equation above, k is a constant. If $x = 9$, what is the value of k ?

- A) 1
- B) 7
- C) 16
- D) 79

2.) Which of the following is equivalent to the sum of the expressions $a^2 - 1$ and $a + 1$?

- A) $a^2 + a$
- B) $a^2 - 1$
- C) $2a^2$
- D) a^2

3.) $2(p+1) + 8(p-1) = 5p$

What value of p is the solution of the equation above?

4.) If $3(c+d) = 5$, what is the value of $c+d$?

- A) $\frac{3}{5}$
- B) $\frac{5}{3}$
- C) 3
- D) 5

5.) If $\sqrt{x} + \sqrt{9} = \sqrt{64}$, what is the value of x ?

- A) $\sqrt{5}$
- B) 5
- C) 25
- D) 55

6.) What value of t is the solution of the equation below?

$$\frac{2}{3}t = \frac{5}{2}$$

7.) Which expression is equivalent to $(2x^2 - 4) - (-3x^2 + 2x - 7)$?

- A) $5x^2 - 2x + 3$
- B) $5x^2 + 2x - 3$
- C) $-x^2 - 2x - 11$
- D) $-x^2 + 2x - 11$

8.)

x	$f(x)$
0	-2
2	4
6	16

Some values of the linear function f are shown in the table above. What is the value of $f(3)$?

- A) 6
- B) 7
- C) 8
- D) 9

9.) $2(5x - 20) - (15 + 8x) = 7$

What value of x satisfies the equation above?

10.) Simplify the following expression: $3(x + 5) - 6$

11.) If $f(x) = \frac{x^2 - 6x + 3}{x - 1}$, what is $f(-1)$?

- A) -5
- B) -2
- C) 2
- D) 5

12.) Which of the following ordered pairs (x, y) satisfies the inequality $5x - 3y < 4$?

- I. (1,1)
- II. (2,5)
- III. (3,2)

- A) I only
- B) II only
- C) I and II only
- D) I and III only

13.) If $a - b = 12$ and $\frac{b}{2} = 10$, what is the value of $a + b$?

- A) 2
- B) 12
- C) 32
- D) 52

14.) $3x + x + x + x - 3 - 2 = 7 + x + x$

In the equation above, what is the value of x ?

- A) $-\frac{5}{7}$
- B) 1
- C) $\frac{12}{7}$
- D) 3

15.) $g(x) = 2x - 1$

$$h(x) = 1 - g(x)$$

The functions g and h are defined above. What is the value of $h(0)$?

- A) -2
- B) 0
- C) 1
- D) 2