

Name: _____

Date: _____

Practice Test – Unit 1

Rules:

- You may use a calculator.
- You must work in pencil.
- You must show your work.

Directions: Please simplify the following with your calculator. Draw the buttons that you need to press so that you only hit the equals sign once to get your answer.

1. $2^{25} =$ 33554432

$2 \wedge 25$

2. $27^{\frac{1}{3}} =$ 3

$27 \wedge (1 \div 3)$

3. $\frac{12^2 - 44}{2} =$ 50

$(12 \wedge 2 - 44) \div 2$

4. $\sqrt{225} =$ 15

$\boxed{\text{and}} \boxed{x^2} 225$

5. $-41.75 - (-6.235) =$ -35.515

Same buttons

6. $\frac{1}{3} \left(\frac{2}{3} - \frac{5}{7} \right)^2 + \frac{6}{5}$ $\frac{7943}{6615}$ $1 \div 3 (2 \div 3 - 5 \div 7) \wedge 2 + 6 \div 5$

Directions: Please write a mathematical expression for the following.

1. The opposite of five squared.

-5^2

2. Negative five to the second power.

$(-5)^2$

3. The opposite of negative three squared.

$-(-3)^2$

4. The opposite of the opposite of twelve squared.

$-(-12^2)$

5. The opposite of nine.

-9

6. The opposite of the quantity nine plus six.

$-(9+6)$

Directions: Please simplify the following.

1. -3^2 2. $(-3)^2$ 3. $-(3)^2$ 4. $-(-3)^2$ 5. $-(-3^2)$

9 9 -9 -9 9

Directions: Please simplify the following. You may use your calculator but show each line of your work. Write your answer on the line below.

1. $7 - 3(4)$ -5

$7 - 12$
 -5

2. $2 - 3(4) - 3 + 8 \div 4$ -11

$2 - 12 - 3 + 2$
 $-10 - 3 + 2$
 $-13 + 2$

3. $5 + 3(2 - 6)$ -7

$5 + 3(-4)$
 $5 - 12$
 -7

4. $4^2 - 3(6 - 2)^2$ -32

$4^2 - 3(4)^2$
 $16 - 3(16)$
 $16 - 48 = -32$

5. $-2^2 + 3(4 - 5)^4$ -1

6. $\frac{(4 - 3(2))^2 - 4}{2} + 3$ 3

7. $\frac{- (8 - 3)(12 + 2)}{6 - 2}$ -17.5 or $-\frac{35}{2}$

$\frac{-(5)(14)}{6-2} = \frac{-5(14)}{4} = \frac{-70}{4}$

$\frac{(4-6)^2 - 4}{2} + 3$
 $\frac{(-2)^2 - 4}{2} + 3$
 $\frac{4-4}{2} + 3$
 $\frac{0}{2} + 3$
 $0 + 3 = 3$

Directions: Please evaluate the following expressions for the given value of the variable. Show all of your work. Please write your answer on the line.

1. $a + b$ $a = -2$ $b = -9$

-11

$$\begin{aligned} & -2 + (-9) \\ & -2 - 9 \\ & -11 \end{aligned}$$

2. $4a - 3b$ $a = -6$ $b = -8$

0

$$\begin{aligned} & 4(-6) - 3(-8) \\ & -24 + 24 \\ & 0 \end{aligned}$$

3. $x(x - y + 6)$ $x = 4$ $y = 2$

32

$$\begin{aligned} & 4(4 - 2 + 6) \\ & 4(2 + 6) \\ & 4(8) \\ & 32 \end{aligned}$$

4. $\frac{a-b}{b-a}$ $a = 4$ $b = 6$

-1

$$\begin{aligned} & \frac{4-6}{6-4} \\ & \frac{-2}{2} = -1 \end{aligned}$$

5. $-x^2$ $x = -2$

-4

$$\begin{aligned} & -(-2)^2 \\ & -(4) \\ & -4 \end{aligned}$$

6. x^2 $x = -3$

9

$$\begin{aligned} & (-3)^2 \\ & 9 \end{aligned}$$

7. $a - b$ $a = -2$ $b = -4$

2

$$\begin{aligned} & -2 - (-4) \\ & -2 + 4 \\ & 2 \end{aligned}$$