

1.1-1.4 Study Guide

Simplify using the order of operations:

Ex: $8 + 10 \div 5 - 3$

7

Ex: $5^2 - 8 \cdot 2$

9

Ex: $\frac{16 \cdot 3 - 4}{16 - 3 \cdot 4}$

11

Ex: $25 - (2 + 2) \cdot 3$

13

Write the power:

Ex: $6 \cdot 6 \cdot 6 \cdot 6 \cdot 6$

6^5

Ex: 4 squared

4^2

Evaluate the power:

Ex: 3^2

9

Ex: 1^4

1

Ex: 2^4

16

Evaluate the expression:

Ex: $7 \cdot (2a - 1)$ when $a = 3$

35

Ex: $4c^2 - 2c$ when $c = 5$

90

Ex: $40 - \frac{32}{x}$ when $x = 4$

32

Ex: $13 - 3x \div 5 + 9$ when $x = 5$

19

Translate the verbal phrase into an algebraic expression

Ex: The product of 11 and a number x

$$11x$$

Ex: The quotient of a number b and 15

$$\frac{b}{15}$$

Ex: Twice the sum of a number and 2

$$2(x + 2)$$

Find the unit rate:

Ex: \$75 for 5 video games

\$15 per game

Ex: 32 pencils in 8 boxes

4 pencils per box

Translate the verbal phrase into an equation or inequality

Ex: The difference of a number c and 17 is greater than 33

$$c - 17 > 33$$

Ex: The sum of 14 and twice a number x is 21

$$14 + 2x = 21$$

Check whether the given number is a solution to the equation or inequality. Show your work.

Ex: $6x + 7 = 25$; $x = 3$

$$25 = 25 \text{ YES}$$

Ex: $\frac{m}{3} + 30 < 33$; $m = 9$

$$33 < 33 \text{ NO}$$

Ex: $6a + 9 \geq 21$; $a = 2$

$$21 \geq 21 \text{ YES}$$