

Worksheet 1.3 and 1.4 – Order of Operations and Equations and Inequalities - Textbook pages 16-30**LEVEL 1**

Evaluate the expression for the given value of the variable. Show your work.

1) $x^5 + 7$ when $x = 3$

2) $3y^3 \div 4$ when $y = 2$

3) $\frac{1}{2} \cdot \frac{48}{b} + 7$ when $b = 6$

4) $x^2 - 3x$ when $x = 7$

Decide whether the following is an expression, an equation, or an inequality.

5) $5.5 = 3x - 9$

6) $3x - 2 \geq 12$

7) $7x - 2$

LEVEL 2

Evaluate the expression. Show your work.

8) $6 \div 3 \cdot 8$

9) $\frac{2}{3} \cdot 3^2 \div 3$

10) $12(2 + 0.5) - 18$

Check if the given number is a solution of the equation. Show your work.

11) $2x + 3 = 17$; 7

12) $y + 3y = 2y + 6$; 3

13) $5x + 3x = 30 - 2x$; 5

Check if the given number is a solution of the inequality. Show your work.

14) $x - 5 \leq 7$; 12

15) $x^2 + 7 \geq 10$; 2

16) $\frac{10+c}{c} < c - 3$; 5

LEVEL 3

Evaluate the expression. Show your work.

17) $[(7 - 5)^5 \div 8] - 4$

18) $\frac{6 + 4}{2^4 + 4 \div 2}$

Match the verbal sentence with its mathematical representation.

_____ 19) The square of x is equal to 36.

A) $x + 40 = 12$

_____ 20) The difference of 4 and x is less than or equal to 30.

B) $x^2 = 36$

_____ 21) The sum of x and 40 is equal to 12.

C) $4 - x \leq 30$

LEVEL 4

22) During a track meet, Kelly throws the shotput 51 feet, 50 feet, and 58 feet. Write an expression that represents the length of his average throw in feet. Evaluate the expression. Show your work.

23) You are budgeting money to buy a video game system that costs \$145 including tax. If you save \$5 per week, will you have enough money in 6 months? You write the inequality $5n \geq 145$ to model the situation. What do the 5, the n , and the 145 represent? Use mental math to solve the inequality.