

CYU 1.4 Exponent, Order of Operation, Variable Expressions & Equations DAY THREE

Use when you get it right all by yourself

**S** Use when you did it all by yourself, but made a silly mistake

**H** Use when you could do it alone with a little help from teacher or peer

**G** Use when you completed the problem in a group

**X** Use when a question was attempted but wrong (get help)

**N** Use when a question was not even attempted

Equation VS Expression

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Translating words to mathematical sentences	1acdegh	1bf	1ij
Operation Symbols: +, -, ·, ÷	2	<del>                    </del>	<del>                    </del>
Order of Operations: PEMDAS	2	3	5

Perimeter/Area

1. Write each sentence as an equation or inequality. Use x to represent any unknown number.

- a. One increased by two equals the quotient of nine and three.

$$1 + 2 = 9 \div 3$$

- b. Four subtracted from eight is equal to two squared.

$$8 - 4 = 2^2$$

- c. Three is not equal to four divided by two.

$$3 \neq 4 \div 2$$

- d. The difference of sixteen and four is greater than ten.

$$16 - 4 > 10$$

- e. The sum of five and a number is twenty.

$$5 + x = 20$$

- f. Seven subtracted from a number is zero.

$$x - 7 = 0$$

- g. The product of 7.6 and a number is 17.

$$7.6x = 17$$

- h. 9.1 times a number equals 4.

$$9.1x = 4$$

- i. Thirteen minus three times a number is 13.

$$13 - 3x = 13$$

- j. Eight added to twice a number is 42.

$$2x + 8 = 42$$



2. Fill in each blank with one of the following operations: add, subtract, multiply, or divide.
- To simplify the expression  $1 + 3 \cdot 6$ , first multiply.
  - To simplify the expression  $(1 + 3) \cdot 6$ , first add.
  - To simplify the expression  $(20 - 4) \cdot 2$ , first subtract.
  - To simplify the expression  $20 - 4 \div 2$ , first divide.

3. Are parentheses necessary in the expression  $2 + (3 \cdot 5)$ ? Explain your answer.

no multiply/divide come before add/subtract in PEMDAS

4. Fill in the chart below.

Length: l	Width: w	Perimeter of a Rectangle	Area of a rectangle
4 in	3 in	a) 14 in	b) 12 in <sup>2</sup>
6 in	1 in	c) 14 in	d) 6 in <sup>2</sup>
5.3 in	1.7 in	e) 14 in	f) 9.01 in <sup>2</sup>
4.6 in	2.4 in	g) 14 in	h) 11.04 in <sup>2</sup>

$$P = 2l + 2w \quad A = lw$$

5. Insert a set of parentheses so that the following expression simplifies to 32.  $(20 - 4) \cdot 4 \div 2$

$$\begin{aligned} &16 \cdot 4 \div 2 \\ &64 \div 2 \\ &\boxed{32} \end{aligned}$$

6. Determine whether each is an expression or an equation.

- $5x + 6$  expression
- $2a = 7$  equation
- $3a + 2 = 9$  equation
- $4x + 3y - 8z$  expression
- $5^2 - 2(6 - 2)$  expression

**CYU Reflection:** How far can you go: basic, intermediate, or advanced?

**Rate your mastery level!**

How confident are you with the skills this CYU covered? Circle the score you would give yourself.

