



Do you know HOW?

Write an algebraic expression for each phrase.

- a number n divided by 4 $\frac{n}{4}$
- 2 less than the product of 5 and n $5n - 2$
- The table shows how the total cost of a field trip depends on the number of students. What is a rule for the total cost of the tickets? Give the rule in words and as an algebraic expression.

Field Trip $12n + 150$

Number of Students	Total Cost
20	$(12 \cdot 20) + 150$
40	$(12 \cdot 40) + 150$
60	$(12 \cdot 60) + 150$

- The sign shows the costs associated with a whitewater rafting trip. Write an expression to determine the cost of 3 children and 1 adult renting equipment for a whitewater rafting trip that lasts h hours.

Whitewater Tours

Adult Ticket	\$53
Child Ticket	\$32
Equipment Rental	\$5 per hour

$53a + 32c + 5h \rightarrow 53(1) + 32(3) + 5h$

Simplify each expression.

- $24 \div (3 + 2^2) = 24 \div (3 + 4) = 24 \div (7) = \frac{24}{7}$ $53 + 96 + 5h = 149 + 5h$
- $\sqrt{144} = 12$

Evaluate each expression for the given values of the variables.

7. $3x \cdot 2 \div y$; $x = 3$ and $y = 6$
 $3(3) \cdot 2 \div 6 = 9 \cdot 2 \div 6 = 18 \div 6 = 3$

8. $(4a)^3 \div (b - 2)$; $a = 2$ and $b = 4$
 $(4 \cdot 2)^3 \div (4 - 2) = 8^3 \div (4 - 2) = 8^3 \div (2) = 512 \div 2 = 256$

- Name the subset(s) of real numbers to which each number belongs. Then order the numbers from least to greatest. $\sqrt{105}, -4, \frac{4}{3}$
 $\sqrt{105} \rightarrow$ irrational
 $-4 \rightarrow$ rational, integers
 $\frac{4}{3} \rightarrow$ rational

- Estimate $\sqrt{14}$ to the nearest integer. $\sqrt{14} \rightarrow \sqrt{16} = 4$

- What property is shown in the following equation?
 $(5 + 8) + 11 = 5 + (8 + 11)$ Associative Prop. of +

- Use the table below. If the total cost for n sandwiches is \$16.50, what is the total cost when 1 more sandwich is bought?

Lunch Menu

Salad	\$6.25
Sandwich	\$5.50
Drink	\$2.75

$\rightarrow 16.50 + 5.50 = \22.00

Do you UNDERSTAND?

- What word phrases represent the expressions $-2 + 3x$ and $3x + (-2)$? Are the two expressions equivalent? Explain. Yes, Commutative Prop. of (+)
the sum of negative two and 3 times x ; the sum of 3 times x and negative two
- Use grouping symbols to make the following equation true.
 $4^2 + (2 \cdot 3) = 16 + 6 = 22 \neq 54$
 $(4^2 + 2) \cdot 3 = 54$ $(4^2 + 2) \cdot 3 = (16 + 2) \cdot 3 = 18 \cdot 3 = 54$
- Choose the correct word to complete the following sentence: A natural number is (always, sometimes, never) a whole number. always
whole natural
- How many natural numbers are in the set of numbers from -10 to 10 inclusive? Explain. natural numbers start at 1
 $-10, -9, -8, -7, -6, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10$ (10)
- What is the simplified form of $\frac{3abc}{abc}$, when $abc \neq 0$? Explain using the properties of real numbers. $\frac{3abc}{abc} = 3$
- Reasoning Are the associative properties true for all integers? Explain. Yes, true for all real numbers and integers are real numbers
- Use the Commutative Property of Multiplication to rewrite the expression $(x \cdot y) \cdot z$ in two different ways.
 $(y \cdot x) \cdot z$
 $z \cdot (x \cdot y)$