

What are the 4 operations and what words/thoughts come to mind with each of these operations?

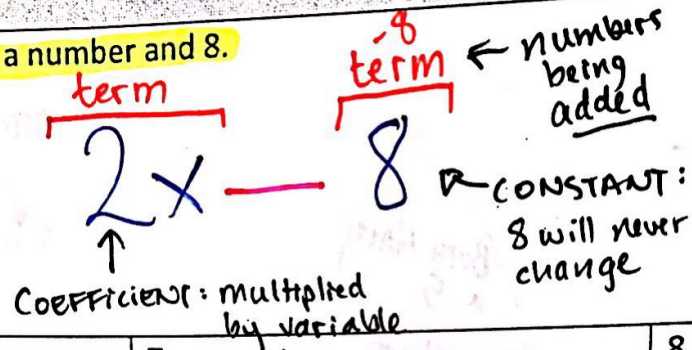
<p>ADDITION +</p> <ul style="list-style-type: none"> - sum - add/ed/ing - total - plus - more 	<p>SUBTRACTION -</p> <ul style="list-style-type: none"> - subtract - minus - less - difference - take (away) 	<p>MULTIPLICATION</p> <ul style="list-style-type: none"> - multiply/ing - times/ed/ing - product - () by () - () • () - each 	<p>DIVISION</p> <ul style="list-style-type: none"> - divide/d/ing - quotient - shared among a group - divided by - over split - fractions
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Give two ways to interpret the algebraic expression in words → verbal expression

<p>1. <u>$x+5$</u></p> <ul style="list-style-type: none"> • a number <u>plus</u> 5 • a number <u>added</u> to 5 	<p>2. <u>$y-4$</u></p> <ul style="list-style-type: none"> • a number <u>subtracted</u> by 4. • 4 <u>less than</u> a number. 	<p>3. <u>$7k$</u></p> <ul style="list-style-type: none"> • 7 <u>times</u> a number • THE <u>PRODUCT</u> OF 7 AND A <u>NUMBER</u> 	<p>4. <u>$\frac{10}{8}$</u></p> <ul style="list-style-type: none"> • 10 <u>divided by</u> a number • 10 <u>split by</u> a number
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Write an algebraic expression for the verbal expression. Identify the terms, coefficients, constants, factors.

5. The difference of twice a number and 8.



6. 10 more than five times a number.

$$5x + 10$$

- Terms: 10 and 5x
- Coefficients: 5
- Constants: 10
- Factors: 1, 5

7. 5 less than one third a number.

$$\frac{1}{3}x - 5$$

- Terms: $\frac{1}{3}x$ and -5
- Coefficients: $\frac{1}{3}$
- Constants: -5
- Factors: no integer divides evenly into $\frac{1}{3}x$ and -5

8. 7 increased by the quotient of number and 6.

- Terms:
- Coefficients:
- Constants:
- Factors:

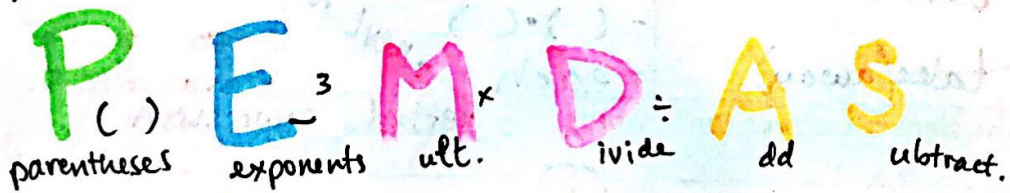
Order of Operations

Simplify: $19 - 7 + 12(2^2)$ in two different orders

$$\begin{aligned} &12 + 12(4) \\ &24(4) \\ &96 \end{aligned}$$

$$\begin{aligned} &19 - 7 + 12(2^2) \\ &19 - 7 + 12(4) \\ &12 + 48 \\ &60 \end{aligned}$$

How do you remember the correct order?



Evaluate each expression for $x=3, y=1, z=-6$

9. $4x - 3y + z$

$$\begin{aligned} &4(3) - 3(1) + (-6) \\ &12 - 3 + (-6) \\ &9 + (-6) \\ &3 \end{aligned}$$

10. $8 - 3xyz$

11. $(x^2 + z^2) - 3y$

$$\begin{aligned} &(3^2 + (-6)^2) - 3(1) \\ &(9 + 36) - 3 \\ &45 - 3 \\ &42 \end{aligned}$$

12. $\frac{9z}{x} + 2y$

You are selling cupcakes and lemon bars for a fundraiser for building a new library. Cupcakes cost \$1.50 each and lemon bars are \$.50 each. Write an expression that represents the amount of money you make from the bake sale.



Variables:

C = number of cupcakes sold
 L = number of lemon bars sold

} \$ MADE = $\$1.50C + \$0.50L$

How much would you make if you sold 20 cupcakes and 35 lemon bars?

$$= 1.50(20) + 0.50(35)$$

$$= \$30 + \$17.50$$

$$= \boxed{\$47.50}$$

Ex 14:

At Chili's the other night the bill was d dollars before tax. The rate of tax is 8%.

rate of tax = 0.08
 amt due of tax = Bill (0.08)



- Write an expression that represents how much the total bill was.

$$\text{BILL} = \text{DINNER} + \text{TAX DUE}$$

$$= 35 + 35(0.08)$$

$$= 35 + \$2.80$$

$$= \boxed{\$37.80}$$

- If $d = \$35$ what was the total bill?
dinner cost

Write an expression that represents how much you owe if you went to dinner with f friends and you split the bill evenly amongst you and your friends.

- If $d = \$40$ and $f = 4$

$$= \$40 + \$40(0.08)$$

$$= 40 + 3.20$$

$$= 43.20 \div 4 \Rightarrow \boxed{\$10.80 \text{ each}}$$

Ticket out the Door

Given the variable expression $4x + 2y - 6$

Identify: Terms: Coefficients: Constants: Factors:

Let $x =$ _____ and $y =$ _____ then evaluate the expression.