

Warm-up

Nov 18

(a) The sum of a number and 9

$$x + 9$$
$$9 + x$$

(b) Solve for x:  $\frac{9x}{9} = \frac{63}{9}$ 

$$x = 7$$

$$\frac{x}{7} = 42$$
$$x = 294$$

(c) Combine the like terms:  $6a + 4b - 2a + 7b$ 

$$4a + 11b$$

Solve for n:

$$\frac{9}{n} = 3$$

$$\frac{9}{3} = \frac{3n}{3}$$

$$3 = n$$

\* Multiply

\* Divide

Solving for the variable when dividing:

- Sometimes it only takes one step (like we're used to):

$$\begin{aligned} > \frac{n}{4} = 4 \\ \frac{n}{\cancel{4}} &= 4 \quad \times 4 \quad \times 4 \\ n &= 16 \end{aligned}$$

- Other times, it takes two steps:

$$\begin{aligned} > \frac{20}{n} = 5 \\ \frac{20}{\cancel{n}} &= 5 \quad \times n \quad \times n \\ \frac{20}{5} &= \frac{5n}{5} \quad \star \\ 4 &= n \end{aligned}$$

Let's do these together

$$\frac{42}{n} = 6$$

$$\frac{42}{6} = \frac{6n}{6}$$
$$7 = n$$

$$\frac{63}{x} = 9$$

$$\frac{63}{9} = \frac{9x}{9}$$

$$7 = x$$

You try:

$$a) \frac{100}{25} = 25$$

$$\frac{100}{25} = \frac{25v}{25}$$

$$4 = v$$

$$c) \frac{81}{9} = 9n$$

$$\frac{81}{9} = \frac{9n}{9}$$

$$9 = n$$

$$b) \frac{55}{11} = 11$$

$$\frac{55}{11} = \frac{11k}{11}$$

$$5 = k$$

$$d) \frac{22}{2} = 2x$$

$$\frac{22}{2} = \frac{2x}{2}$$

$$11 = x$$

1. John earns \$15 per hour at his part-time job. If he works  $h$  hours in a week, write an algebraic expression to represent his weekly earnings.

$$15h \quad \checkmark$$

2. Sarah charges \$25 per lawn for mowing lawns in her neighborhood. If she mows  $n$  lawns in a month, write an algebraic expression for her total earnings.

$$25n$$

3. A bakery sells cookies for \$2 each. If they sell  $c$  cookies in a day, write an algebraic expression to represent their daily revenue.

$$2c$$

4. Lisa tutors students and charges \$40 per hour. If she tutors for ~~40~~ <sup>$t$</sup>  hours in a week, write an algebraic expression to represent her weekly income.

$$4t$$

- 1. A gym charges \$30 per month for each membership. If  $m$  members join, write an algebraic expression for the gym's monthly income.**
- 2. Alex buys apples that cost \$3 each. If he buys  $a$  apples, write an algebraic expression for the total cost of his apples.**
- 3. A movie theater charges \$12 per ticket. If  $t$  tickets are sold, write an algebraic expression for the total revenue from ticket sales.**
- 4. Emma babysits and charges \$10 per hour. If she babysits for  $h$  hours in a week, write an algebraic expression to represent her weekly earnings.**
- 5. A carpenter charges \$50 per project for small furniture repairs. If he completes  $p$  projects in a month, write an algebraic expression to represent his total earnings.**
- 6. A café sells sandwiches for \$8 each. If  $s$  sandwiches are sold in a day, write an algebraic expression for the total daily sales.**

# Homeworkk





## Attachments

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Division\_Equation\_Worksheet.docx