

**Do Now:**

1)  $-72 \div (-9) = 8$

2)  $24(-3) = -72$

3)  $-18 + 32 = 14$

4)  $-9 - 17 = -26$

$\begin{array}{r} 24 \\ \times 3 \\ \hline 72 \end{array}$

Sep 29-3:31 PM

**2.4 Variables and Equations**

7.NS  
7.EE

- SWBAT solve equations with variables.
- SWBAT write a verbal sentence as an equation.
- SWBAT represent situations using algebraic symbols; analyze situations using algebraic symbols.

• **Calculators: No**

Sep 29-3:33 PM

An **equation** is a mathematical sentence formed by placing an equal sign between two expressions.

A **solution of an equation** with a variable is a number that produces a true statement when it is substituted for the variable.

Sep 29-3:33 PM

Write the verbal sentence as an equation.

a) The sum of x and 6 is 9.  $x + 6 = 9$   $x = 3$

b) The difference of 12 and y is 15.  $12 - y = 15$   $y = -3$

c) The product of p and -4 is 32.  $p(-4) = 32$   $p = -8$

d) The quotient of n and 2 is 9.  $n \div 2 = 9$  or  $\frac{n}{2} = 9$   $n = 18$

Sep 29-3:35 PM

Write the verbal sentence as an equation.

a) The sum of 9 and b is 17.  $9 + b = 17$   $b = 8$

b) The difference of z and 23 is -7.  $z - 23 = -7$   $z = 16$

c) The product of 12 and -k is -60.  $12(-k) = -60$   $k = 5$

d) The quotient of 5 and t is 11.  $5 \div t = 11$  or  $\frac{5}{t} = 11$   $t = \frac{5}{11}$

Sep 29-3:35 PM

Tell whether 5 or -5 is a solution of  $-8y = 40$

$-8y = 40$

When  $y = 5$ :  $-8(5) = -40$  (not a solution)

When  $y = -5$ :  $-8(-5) = 40$  (solution)

Sep 29-3:38 PM

Tell whether 52 or 60 is a solution of  $\frac{x}{4} = 13$

When  $x=52$       When  $x=60$

$$\frac{52}{4} = 13$$

$$\frac{60}{4} = 15$$

Sep 29-3:38 PM

Solve the equation using mental math.

a) What number plus 3 equals 11?  
 $x + 3 = 11$        $x = 8$

b) 16 minus what equals -9?  
 $16 - x = -9$        $x = 25$

c) -20 equals -5 times what number?  
 $-20 = -5(y)$        $-5y = -20$        $y = 4$

d) What number divided by 6 equals -3?  
 $\frac{x}{6} = -3$        $x = -18$

Sep 29-3:42 PM

Raymond is having a party and is serving quesadillas. There will be 12 people at the party. Each quesadilla will be cut into 4 wedges, and he expects each person to eat 3 wedges. How many quesadillas does Raymond need to make?

12 people eat 3 wedges each  
 $12(3) = 36$  wedges eaten       $\frac{36}{4} = 9$  quesadillas

Sep 29-3:44 PM

An animal shelter charges \$75 to adopt a puppy. One week they collected \$1500 in adoption fees. How many puppies were adopted that week?

$$\begin{array}{r} 20 \\ 75 \overline{)1500} \\ \underline{-1500} \\ 00 \\ \underline{-0} \\ 0 \end{array}$$

20 puppies

Sep 29-3:44 PM

## Mini-quiz

Grade: «grade»  
 Subject: Pre-Algebra  
 Date: «date»

Sep 29-3:50 PM

1 Solve the equation using mental math:  $a + 11 = 19$

Sep 29-3:47 PM

$$2 \quad 34 - b = 27$$

Sep 29-3:49 PM

$$3 \quad -3c = 12$$

Sep 29-3:49 PM

$$4 \quad 63 / d = 7$$

Sep 29-3:49 PM

### Exit Pass 2.4

Solve the equation

$$5(4(3(2 + x))) = 60$$

$$60(2+x) = 60 \quad x = -1$$



Oct 3-10:51 AM

"Don't blame the sea if you cannot catch a fish."

Working individually or with a partner, complete the worksheet.

pg. 23 #1-27 all



Oct 3-10:52 AM

### Reflections

#### 2.4 Variables and Equations

7.NS

7.EE


- SWBAT solve equations with variables.
- SWBAT write a verbal sentence as an equation.
- SWBAT represent situations using algebraic symbols; analyze situations using algebraic symbols.

Oct 13-12:19 PM

Homework

Finish workbook

pg. ~~87-88~~ #8 - 34

A cartoon illustration of a character's head wearing a blue cap with the words "THINKING CAP" written on it. A glowing yellow lightbulb is positioned on top of the cap. The character has a neutral expression and is looking forward.

Oct 3-10:52 AM