

## Day One

7.NS. 1

Solve the following expression.

$$(-5.5) + (3.7) - 7.6$$

$$\begin{array}{r} 7.6 \\ +5.5 \\ \hline -13.1 \end{array}$$

$$-13.1 + 3.7$$

$$\begin{array}{r} 12.11 \\ +3.7 \\ \hline -9.4 \end{array}$$

7.EE.1

Simplify the following expression

$$(-6x + 3y) - 4x^2 + 3(x + 2y) - 3x + 9y - 4x^2$$

$$\begin{array}{l} (13x) + (6y) \\ -3x + 9y - 4x^2 \end{array}$$

7.EE.4a

Create an equation and solve

John takes a taxi ride that costs \$21. The taxi charges \$3 upon entry and \$1.50 per mile. How many miles did John travel in the taxi.

$$1.50m + 3 = 21$$

$$\begin{array}{r} -3 \quad -3 \\ \hline 1.50m = 18 \\ \hline 1.50 \quad 1.5 \end{array}$$

$M = 12$  miles

$$\begin{array}{r} 12 \\ 15 \overline{)180} \\ \underline{-150} \\ 30 \end{array}$$

## Day Two

7.NS. 2d

Convert the following to a decimal

$$\frac{5}{7} = 0.714285$$

$$\begin{array}{r} 0.7142857 \\ 7 \overline{)15000000} \\ \underline{49} \\ 10 \\ \underline{7} \\ 30 \\ \underline{28} \\ 20 \\ \underline{14} \\ 60 \\ \underline{56} \\ 40 \\ \underline{35} \\ 5 \end{array}$$

7.RP.2

Jack can mow an 1800 sq ft lawn in 2 hours. How long will it take him to mow a 2400 sq ft lawn?

$$2\frac{2}{3} \text{ hr}$$

$$\frac{1800 \text{ ft}^2}{2 \text{ hr}} = \frac{2400 \text{ ft}^2}{\square \text{ hr}}$$

7.RP.2b

Identify the constant of proportionality

x	2	3	4	5
y	3	4.5	6	7.5

$$k = \frac{y}{x} = \frac{3}{2} = 1.5$$

## Day Three

7.RP.1

Tech Savvy is cheaper

TechSource sells 8 gb flashdrives for \$6.50. TechSavvy sells 20 gb flashdrives for \$12. Which store has the cheaper flashdrive per gb?

$$\frac{\$6.50}{8 \text{ gb}} = \$0.81 \quad \frac{\$12}{20 \text{ gb}} = \$0.60$$

7.NF.2a

Solve the following expression

$$-7 \frac{1}{2} \div 2 \frac{1}{4} = \boxed{-3 \frac{1}{3}} \quad \frac{15}{2} \div \frac{9}{4} = \frac{15 \cdot 4}{2 \cdot 9} = \frac{60}{18} = \frac{10}{3} = 3 \frac{1}{3}$$

7.EE.4

Solve the following equation.

$$\frac{-3(x + 6.5)}{1} = -6 \cdot -3$$

$$x + 6.5 = +18$$

$$-6.5 \quad -6.5$$

$$\boxed{x = 11.5}$$

## Day Four

7.RP.2a

Solve

$$\boxed{20 = x} = \frac{45.5}{70}$$

$$\frac{13}{70}$$

$$\frac{2 \cdot 20}{91 \cdot 00}$$

$$45.5 \overline{) 91.00}$$

7.RP.2b

Identify the constant of proportionality

$$\boxed{k = 6}$$

$$\frac{3y}{3} = \frac{18x}{3}$$

$$y = 6x$$

$$y = kx$$

7.EE.1

Simplify the expression

$$4f + 4s + 2e$$

$$5f + 2s + 3e$$

$$\boxed{9f + 6s + 5e}$$

Sam brings 4 cups of flour (f), 4 cups of sugar (s), and 2 eggs (e) to make a large batch of sugar cookies. Sadie brings 5 cups of flour (f), 2 cups of sugar (s), and 3 eggs (e). What are their combined ingredients written in the form of an expression?

$$\frac{455}{2} = 227.5$$

## Day Five

7.NS.1

Solve

$$9\frac{4}{5} + (-3\frac{2}{9}) =$$

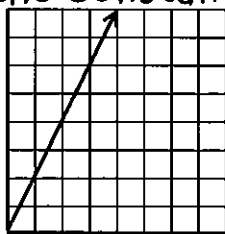
$$9\frac{4}{5} \cdot 9 = 9\frac{36}{45}$$

$$-3\frac{2}{9} \cdot 5 = -3\frac{10}{45}$$

$$\boxed{+6\frac{1}{45}}$$

7.RP.2b

Identify the constant of proportionality



$$k = \frac{y}{x} = \frac{2}{1} = \boxed{2}$$

7.RP.2b

Find the Cost per Ounce.



= \$1.35

$$\frac{41.35}{16 \text{ oz}} = \boxed{\frac{\$0.84}{1 \text{ oz}}}$$

## Day Six

7.RP.2

Find the missing side length



$$\frac{A}{B} = \frac{x}{9} = \frac{12}{15}$$

$$\boxed{x = 7.2}$$

7.NS.1C

Solve

$$\begin{array}{r} 14 \ 10 \\ 15 \cdot 0 \\ - 9 \cdot 6 \\ \hline 5 \cdot 4 \end{array}$$

✓ bigger

$$-15 + (+9.6) = \boxed{-5.4}$$

diff = sub.

7.EE.4b

Solve and graph the following.


$$\begin{array}{r} -3x + 15 > 3 \\ -15 \quad -15 \\ \hline -3x > -12 \end{array}$$

$$\boxed{x > -4}$$

## Day Seven

7.EE.2

If the perimeter is equal to 64, solve for x.

$3x$   
  
 $5x$

$3x + 5x + 3x + 5x = 64$   
 $\frac{1}{16}x = 64$   
 $\frac{1}{16} \times 16 \quad \frac{16}{16} \quad x = 4$

7.RP.2C

Write an equation to match the table by using the constant of proportionality.

$$y = 7x$$

x	3	4	5
y	21	28	35

$$k = \frac{y}{x} = \frac{21}{3} = 7$$

7.RP.3

Use a proportional relationship to solve  
 Jasmine gets paid 15% Commission for every sale she makes. If she sold \$180 worth of products this week, what will her commission be?

$$\frac{27}{15\%} = \frac{180}{100\%}$$

*neither*

## Day Eight

7.RP.2C

Create a table to match this equation.

$$y = 5.5x$$

x	y
0	0
1	5.5
2	11
3	16.5

7.RP.3

Solve using proportions

$$\frac{105 - 75}{75} = \frac{30}{75}$$

$$\frac{40}{100\%} = \frac{30}{100\%}$$

*original* Janie's Boutique buys their jeans for \$75 wholesale price. They then sell them for a retail price of \$105. What is percent mark-up does Janie's use to create their retail prices?

7.EE.1

Factor the following expression

$$4(12x - 20y)$$

$$3x - 5y$$

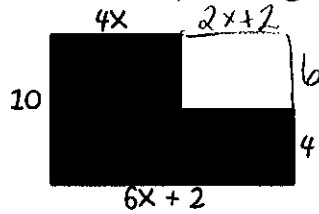
$$4(3x - 5y)$$

## Day Nine

7.EE.1

Find the area of the given shape

Tell students to skip



$$10(6x+2) - 6(2x+2)$$

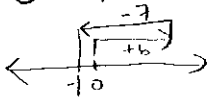
$$60x + 20 - 12x - 12$$

$$48x + 8$$

7.NS.1b

Fill in the blanks

$$6 + -7$$



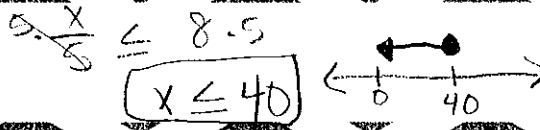
To add 6 plus negative 7 on the number line, start at the zero and move 6 spaces to the right. Then move 7 spaces to the left. This will place you on the answer which is -1.

7.EE.4b

Solve and graph the following.

$$x/5 + 12 \leq 20$$

$$x/5 - 12 \leq 20 - 12$$



## Day Ten

7.EE.4b

Create and solve an inequality for the following situation.

$$4y + 20 \geq 36$$

$$-20 \quad -20$$

$$4y \geq 16$$

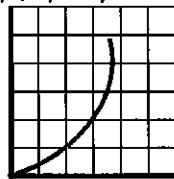
$$\frac{4y}{4} \geq \frac{16}{4}$$

$$y \geq 4 \text{ yds}$$

Miguel earns \$20 a week for helping his dad. He also earns \$4 for every yard he rakes. If he wants to earn atleast \$36 this week, how many yards will he have to rake?

7.RP.3

Label the graph proportional or not proportional.



non-prop  
b/c not a  
straight line

7.EE.1

Solve the following equation

$$3(x + 9) = 90$$

$$3x + 27 = 90$$

$$3x = 63$$

$$\frac{3x}{3} = \frac{63}{3}$$

$$x = 21$$

# Day Eleven

7.NS.1

Solve

$$3\frac{3}{4} + 8\frac{5}{7} - 5\frac{1}{2}$$

$$6\frac{27}{28}$$

$$5\frac{1}{2} \cdot 2 = 11$$

$$-3\frac{3}{4} = -3\frac{3}{4}$$

$$-1\frac{3}{4} + 8\frac{5}{7}$$

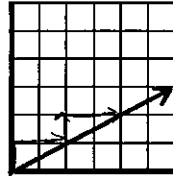
$$8\frac{5}{7} \cdot 4 = 32\frac{20}{7}$$

$$-1\frac{3}{4} \cdot 7 = -11\frac{21}{28}$$

$$6\frac{27}{28}$$

7.RP.2d

Using the graph, determine the unit rate.

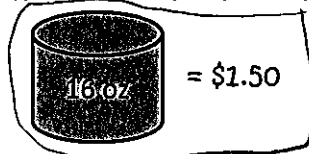


$$k = \frac{y}{x} = \frac{1}{2}$$

7.RP.2a

Calculate which is the better buy.

$$\frac{\$1.50}{16\text{oz}} = \frac{\$0.09}{1\text{oz}}$$



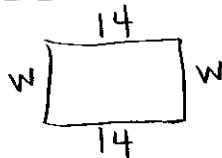
$$\frac{\$1.20}{12\text{oz}} = \frac{\$0.10}{1\text{oz}}$$

# Day Twelve

7.EE.4a

Write an equation and solve

$$2w + 28 = 48$$



A rectangle has a perimeter of 48. Its length is 14. What is its width?

7.EE.1

Simplify the following expression.

$$10a - 9y + 18$$

$$2(3a + 14) + 4a - 9y - 10$$

$$6a + 28 + 4a - 9y - 10$$

7.RP.1

Compute unit rate.

$$\frac{1.5\text{ mi}}{\frac{1}{4}\text{ hr}} = \frac{6\text{ mi}}{1\text{ hr}}$$

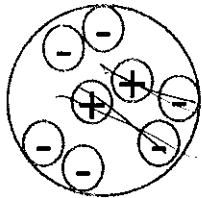
Leo can run 1.5 miles in  $\frac{1}{4}$  of an hour. How fast can Leo run?

## Day Thirteen

7.NS.1

Solve

$$-6 + +2 = \boxed{-4}$$

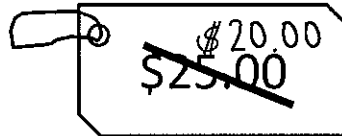


An atom has 6 electrons (-) and 2 protons (+). What is the atom's overall charge?

7.RP.3

Find the percent the item was discounted.

$$\frac{25 - 20}{25} = \frac{5}{25} = \frac{20}{100} = 20\%$$



20%

7.RP.2C

Write an equation to match the table.

$$k = \frac{y}{x} = \frac{22}{4} = 5.5$$

x	3	4	5
y	16.5	22	27.5

$$y = 5.5x$$

## Day Fourteen

7.RP.2a

If directly proportional, give the unit rate. If not directly proportional, explain why?

$$\frac{6}{1} \neq \frac{9}{2} = 4.5$$

not same unit rate

x	0	1	2
y	3	6	9

not going thru origin

7.EE.4

Create an equation and solve.

$$2b + 18 = 22$$

$$\begin{array}{r} 2b + 18 = 22 \\ -18 \quad -18 \\ \hline 2b = 4 \\ \frac{2b}{2} = \frac{4}{2} \end{array}$$

A party store charges \$18 for 6 foil balloons and \$2 for each additional balloon. If you plan on spending \$22, how many balloons can you buy total?

$$b = 2$$

7.NS.2

Solve

$$8\frac{7}{7} - 4\frac{5}{7} = \boxed{4\frac{2}{7}}$$

$$(8) + (-4\frac{5}{7})$$

6 + 2 = 8 total balloons

## Day Fifteen

7.NS.2d Does the following fraction repeat or terminate in its decimal form?

$$0.\overline{5} = \frac{5}{9}$$

$$\begin{array}{r} 0.\overline{5} \\ 9 \overline{) 5.00} \\ \underline{45} \phantom{0} \\ 50 \\ \underline{45} \\ 5 \end{array}$$

7.NS.3 Evaluate the expression when  $b = -24$ .

$$12b + 18$$

$$12(-24) + 18$$

$$-288 + 18 = -270$$

$$\begin{array}{r} 24 \\ \times 12 \\ \hline 48 \\ 240 \\ \hline 288 \\ - 18 \\ \hline 270 \end{array}$$

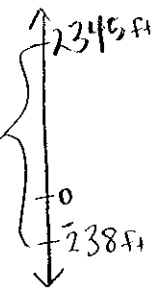
7.RP.3 Solve using a proportional relationship.

$$\frac{95}{30\%} = \frac{315}{100\%}$$

Levi ate a 315 Calorie meal, and 95 calories are from fat. About what percent of Levi's meal is fat? 30%

## Day Sixteen

7.NS.1 Solve



The peak of Mt. Bigfoot has an elevation of 2345 ft above sea level. Hunter's Trench is located 238 ft below sea level. What is the difference in elevation between Mt. Bigfoot and Hunter's Trench?  $2345 - (-238) =$

$$2345 + 238$$

$$\begin{array}{r} 1 \\ 2345 \\ + 238 \\ \hline 2583 \end{array}$$

7.EE.1 Factor the following expression

$$\frac{3(3a^2 + 12ap - 21am)}{a^2 + 4ap - 7am}$$

$$3(a^2 + 4ap - 7am)$$

7.RP.2 Solve.

Cross-multiply & divide

$$\frac{x}{5} = \frac{2}{10}$$

$$\boxed{x = 3.5}$$



## Day Seventeen

7.RP.3

Solve using a proportional relationship.

$$\begin{array}{r} \boxed{\phantom{00}} \\ 108\% \end{array} = \frac{\$15.50}{100\%}$$

Jacob wants to buy a present for his sister. He has picked out an item that costs \$15.50. What will his total amount be after 8% sales tax?

$$\boxed{\$16.74}$$

7.EE.3

Solve

$$\begin{aligned} 3(2a + 7) - 15 &= 42 \\ 6a + 21 - 15 &= 42 \end{aligned}$$

$$\begin{array}{r} 6a + 6 = 42 \\ -6 \quad -6 \\ \hline 6a = 36 \\ \hline a = 6 \end{array}$$

7.RP.2

Find the missing side length.

$$\begin{array}{l} \text{A} \\ \text{B} \end{array} \begin{array}{l} \times \\ \times \end{array} \begin{array}{l} 8.6 \\ 2.5 \end{array} = \frac{2.5}{7}$$

$$\begin{array}{l} \times \\ \times \end{array} \begin{array}{l} A \\ A \end{array} \begin{array}{l} 2.5 \\ \phantom{2.5} \end{array}$$

$$\begin{array}{l} \times \\ \times \end{array} \begin{array}{l} B \\ B \end{array} \begin{array}{l} 24 \\ \phantom{24} \end{array}$$

$$\boxed{a = 6}$$

## Day Eighteen

7.NS.2

Evaluate the expression when  $m = -4$ .

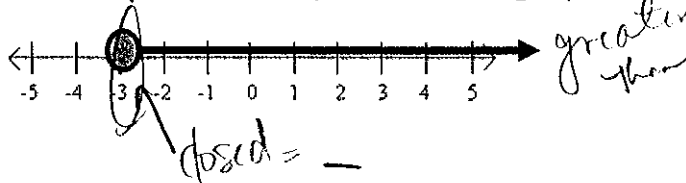
$$3(m) - 5(m + 6)$$

$$3(-4) - 5(-4 + 6) = -12 + 20 = 8$$

7.EE.4b

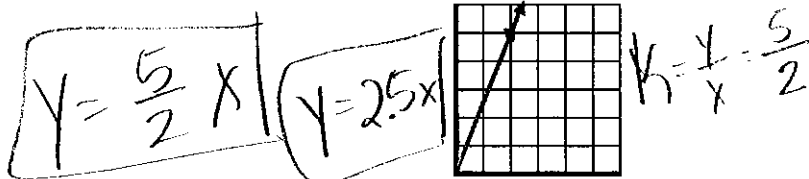
Write an inequality to represent the graph.

$$\boxed{x \geq -3}$$



7.RP.2C

Write an equation to match the graph.



0.148

### Day Nineteen

7.RP.1 Solve

$$\frac{1.5 \text{ laps}}{5 \text{ min}} = \frac{0.3 \text{ laps}}{1 \text{ min}}$$

Donnie can complete 1.5 laps in 5 minutes. What is his distance per minute?

7.EE.4b Write an inequality to represent the situation.

$$4b < 2.52$$

$$b < 0.63$$

Macie buys a package of 4 batteries for under \$2.52. What is the price range for each battery?

7.RP.2b Identify the constant of proportionality.

$$\frac{3y = 21x}{3} \quad y = 7x$$

### Day Twenty

7.RP.2a If directly proportional, give the unit rate. If not directly proportional, explain why?

$$\frac{8.6}{2} = 4.3$$

$$\frac{12.9}{3} = 4.3$$

$$\frac{17.2}{4} = 4.3$$

x	2	3	4
y	8.6	12.9	17.2

yes, unit rate (k) = 4.3

7.RP.3 Solve using a proportional relationship

$$\frac{\$230}{85\%} = \frac{\$270.59}{100\%}$$

Jack's market is having a 15% off sale. A canoe now costs \$230. What was the original price of the canoe?

7.NS.2a Solve

$$-3.9 \cdot 45.6 = -177.84$$

$$\begin{array}{r} 45.6 \\ \times 3.9 \\ \hline 4104 \\ 13680 \\ \hline 17784 \end{array}$$