

Grade 7

Unit 3

Week 4

Parents: Please help your child choose the most appropriate assignment(s) to complete each day. When the day's assignment is done, students finish the two reflection statements on this page.

Please note Extra Practice activities are on-level for the grade level. Re-Engage activities give students additional support.

Special Education students should use the Re-Engage lessons as shown in the weekly plans.

	Monday	Tuesday	Wednesday	Thursday	Friday
Topic	Proportional Relationships: Tables	Proportional Relationships: Graphs	Constant of Proportionality	Write and solve proportional relationships	Determine proportional relationships
Assignment	Unit 3 Lesson 5 Re-Engage Extra Practice	Unit 3 Lesson 8 Re-Engage Extra Practice	Unit 3 Lesson 9 Re-Engage Extra Practice	Unit 3 Lesson 11 Re-Engage Extra Practice	Unit 3 Lesson 12 Re-Engage Extra Practice
Video link	Unit 3 Lesson 5 Student Support Video	Unit 3 Lesson 8 Student Support Video	Unit 3 Lesson 9 Student Support Video	Unit 3 Lesson 11 Student Support Video	Unit 3 Lesson 12 Student Support Video
Fluency Practice	Integers Subtraction Fluency A	Integers Subtraction Fluency B	Integers Subtraction Fluency C	Integers Subtraction Fluency D	Integers Subtraction Fluency A
Reflection	One thing I was successful with is... One thing I need more help with is...	One thing I was successful with is... One thing I need more help with is...	One thing I was successful with is... One thing I need more help with is...	One thing I was successful with is... One thing I need more help with is...	One thing I was successful with is... One thing I need more help with is...

Find this packet on swunmath.com. Click on the hyperlinks to jump to the lesson videos.

Re-Engage

Unit 3 Lesson 5: Compare Ratios in a Table



Name: _____

Date: _____

Model

Compare Ratios in a Table

The table below shows the comparison of how many words each person can text in a minute. Compare the texting rates using the ratio table.

	Miranda	Josephina
Minutes (x)	5	4
Words (y)	250	180
Ratio (y/x)	250/5	180/4

1. Write the ratio to show how many words (y) per minute (x).
2. Simplify each ratio to find the unit rate.
Miranda = $250 \div 5 = 50$ words per min.
Josephina = $180 \div 4 = 45$ words per min.
3. Circle the greatest rate.
Miranda

Structured Guided Practice

Directions: Complete the table. Determine the unit rate. Circle the greater rate.

1. The table shows the number of blocks ran in minutes.

	Dogs	Cats
Minutes (x)	6	8
Blocks (y)	3	2
Ratio (y/x)		

2. The table shows the price of meat in pounds.

	Beef	Chicken
Pounds (x)	5	4
Price (y)	\$15	\$8
Ratio (y/x)		

Re-Engage

Unit 3 Lesson 5: Compare Ratios in a Table



Student Practice

Directions: Complete the table. Determine the unit rate. Circle the greater rate.

1. The table shows the amount of fruit per ounces.

	Smoothie 1	Smoothie 2
Ounces (x)	4	15
Fruit (y)	6	30
Ratio (y/x)		

2. The table shows the price of fruit per pounds.

	Oranges	Apples
Pounds (x)	3	4
Price (y)	\$6.60	\$8.40
Ratio (y/x)		

3. The table shows the amount of visitors over days.

	Museum	Park
Days (x)	5	4
Visitors (y)	450	400
Ratio (y/x)		

4. The table shows meters swam in minutes.

	Bayleigh	Alyson
Minutes (x)	3	2
Meters (y)	75	52
Ratio (y/x)		

5. The table shows the number of pages read in hours.

	Lal	Guneet
Hours (x)	2	3
Pages (y)	360	180
Ratio (y/x)		

6. The table shows how many math facts completed in seconds.

	Classroom 1	Classroom 2
Seconds (x)	15	9
Math facts (y)	75	54
Ratio (y/x)		

Extra Practice

Unit 3 · Lessons 5 & 6: Proportional Relationships: Tables

Name: _____

Date: _____

Directions: Use equivalent fractions to answer the following.

1. Determine whether the ratios below are proportional. What would happen if the second ratio were $\frac{20}{30}$?

$$\frac{15}{20}, \frac{27}{36}, \text{ and } \frac{6}{8}$$

2. Determine whether the ratios below are proportional. What would happen if the first ratio were $\frac{45}{85}$?

$$\frac{10}{22}, \frac{15}{35}, \text{ and } \frac{21}{49}$$

3. The table shows the height and base lengths of several right triangles. Which triangles – if any – are in proportion? What if Triangle C had a height of 1.6?

	Height	Base
Triangle A	8	5
Triangle B	32	20
Triangle C	2.5	1

4. The table shows the lengths and widths of several rectangles. Which of the rectangles – if any – are in proportion? What if Rectangle B had a length of 12?

	Length	Width
Rectangle A	24	6
Rectangle B	48	36
Rectangle C	100	25

5. The table shows the amount of money people earned for working a certain number of hours. Is there a proportional relationship between the amount of money earned and the number of hours worked? What if Nancy made \$150 and Sally made \$180?

	Hours	Earnings
Nancy	10	\$210
Sally	12	\$216
Jan	15	\$225

6. The table shows the amount of money people earned for working a certain number of hours. Is there a proportional relationship between the amount of money earned and the number of hours worked? How many hours are needed to earn \$1,015?

	Hours	Earnings
Ervin	12	\$420
Coby	8	\$280
Tom	24	\$840

Extra Practice

Unit 3 • Lessons 7 & 8: Proportional Relationships: Create Graphs

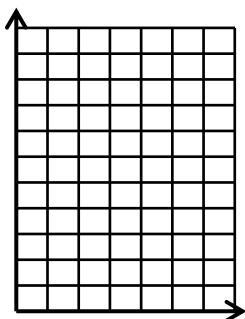
Name: _____

Date: _____

Directions: Graph to answer the following.

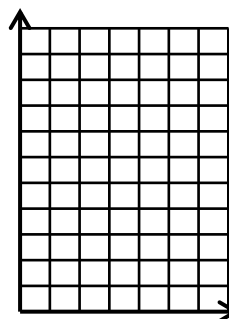
1. The table shows the amount of time it took Adam to do a number of homework assignments on several days. Is the number of assignments he can do in proportion to the amount of time he works?

# of Assignments	Time	(x, y)
8	30 min	
10	25 min	
7	10 min	



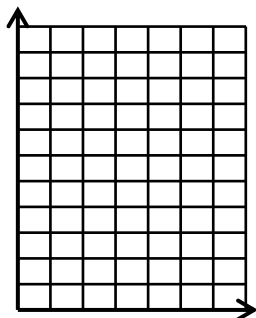
2. The table shows the amount of time it took Candice to do a given number of math problems on several days. Is the number of problems she can do in proportion to the amount of time she works?

# of Problems	Time	(x, y)
8	16 min	
10	20 min	
18	36 min	



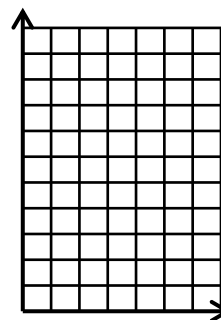
3. The table shows the heights and base lengths of several right triangles. Which triangles, if any, are in proportion to each other?

	Height	Base	(x, y)
Triangle A	8	4	
Triangle B	15	6	
Triangle C	5	2	



4. The table shows the lengths and widths of several rectangles. Which rectangles, if any, are in proportion to each other?

	Length	Width	(x, y)
Rectangle A	16	12	
Rectangle B	52	39	
Rectangle C	28	21	

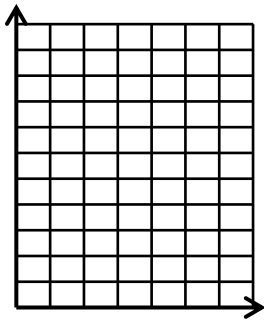


Extra Practice

Unit 3 · Lesson 8: Proportional Relationships: Create Graphs

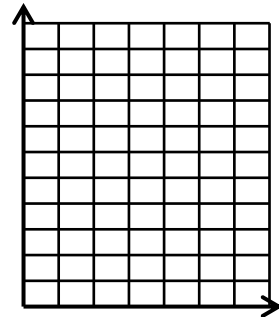
5. The table shows the amount of money people earned for working a certain number of hours. Is the amount of money earned proportional to the number of hours worked?

	Hours	Earnings	(x, y)
Al	31	\$248	
Stan	19	\$247	
Drew	26	\$220	



6. The table shows the amount of money people earned for working a certain number of hours. Is the amount of money earned proportional to the number of hours worked?

	Hours	Earnings	(x, y)
Linda	11	\$220	
Molly	9	\$180	
Theresa	15	\$300	



Re-Engage

Unit 3 Lesson 9: Identify Constant of Proportionality (k)



Name: _____

Date: _____

Model

The **Constant of Proportionality (k)** is the same as the unit rate.

Steps:

1. Determine the ratio.
2. Calculate the unit rate $\frac{y}{x}$
3. Simplify.
4. Write in $y = kx$ form.

Example 1:

Sales	Dollars
5	100

$$\frac{100}{5} = 20 \quad \text{So, } y = 20x$$

Example 2:

Coordinates on a graph: (3, 6)

$$\frac{6}{3} = \frac{2}{1} = y = 2x$$

Structured Guided Practice

Directions: Calculate the constant of proportionality. Write answer in $y = kx$ form.

1.

Hours	People
5	225

2. (3, 18)

Re-Engage

Unit 3 Lesson 9: Identify Constant of Proportionality (k)



Student Practice

Directions: Calculate the constant of proportionality. Write answer in $y = kx$ form.

1.

Hours	Miles
3	180

2. (4, 500)

3.

Cups	Fruit
6	186

4. (60, 30)

5.

Items	Price
10	\$44.00

6. (15, 60)

Extra Practice

Unit 3 · Lesson 9: Constant of Proportionality

Name: _____

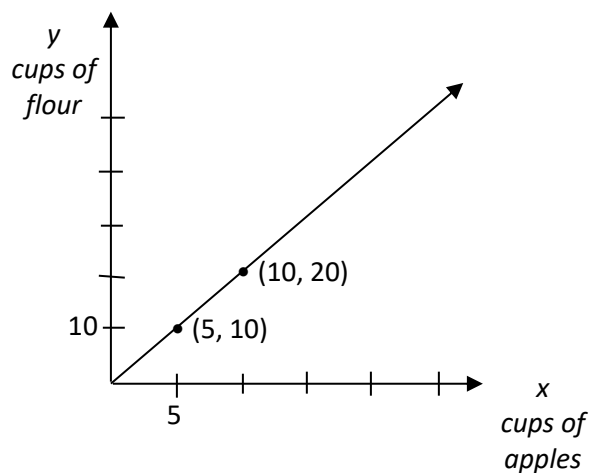
Date: _____

Directions: Determine the constant of proportionality and create an equation.

1. The amount of sugar needed for a cookie recipe is proportional to the amount of chocolate chips, as shown in the table.

Sugar (c)	Chocolate Chips (c)	$\frac{y}{x}$
$\frac{1}{2}$	2	
$\frac{3}{4}$	3	
1	4	

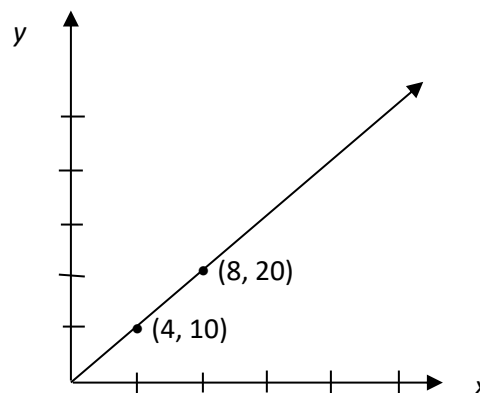
2. The graph below shows the proportions of apples to flour in Betty's cake recipe.



3. The number of miles that Cindy walks is proportional to the number of minutes that she walks.

Miles	Hours	$\frac{y}{x}$
8	2	
18	4.5	
26	6.5	

4. The graph shows a proportional relationship between y and x.

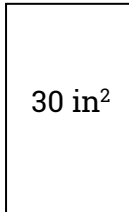


Extra Practice

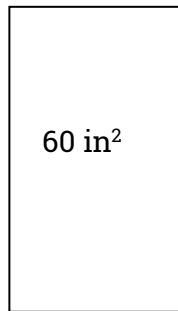
Unit 3 · Lesson 9: Constant of Proportionality

5. The price of a poster is proportional to its area.

\$12



\$24



6. The amount of beans needed for a chili recipe is proportional to the amount of chili powder. Thirty-one ounces of red kidney beans are needed for every two tablespoons of chili powder.

Re-Engage

Unit 3 Lesson 11: Use Division to Solve Simple Equations



Name: _____

Date: _____

Model

Model 1

$$9x = 27$$

Directions: Solve

Step 1: Divide both sides by 9 to get x by itself

$$\frac{9x}{9} = \frac{27}{9}$$

Step 2: Solve both sides

$$x = 3$$

Model 2

$$108 = 12x$$

Directions: Solve

Step 1: Divide both sides by 12 to get x by itself

$$\frac{108}{12} = \frac{12x}{12}$$

Step 2: Solve both sides

$$9 = x \text{ or } x = 9$$

Structured Guided Practice

Directions: Solve.

1. $8x = 32$

2. $6x = 72$

3. $216 = 36x$

4. $114 = 6x$

Re-Engage

Unit 3 Lesson 11: Use Division to Solve Simple Equations



Student Practice

Directions: Plot the point on a graph.

1. $5x = 95$

2. $4x = 88$

3. $2x = 36$

4. $625 = 25x$

5. $128 = 32x$

6. $116 = 19x$

Extra Practice

Unit 3 • Lesson 10 & 11: Proportional Relationships

Name: _____

Date: _____

Directions: Find the unit rate for both variables in $y = kx$ form. Solve for the given variable.

1. $4x = 18y$

Unit rates:

If $x = 6$, then $y =$

If $y = 14$, then $x =$

2. $12a = 8b$

Unit rates:

If $a = 4$, then $b =$

If $b = 24$, then $a =$

3. 4 cars = 16 people

Unit rates:

If cars = 11, then people =

If people = 48, then cars =

4. $\frac{2}{5}k = \frac{3}{8}c$

Unit rates:

If $k = 20$, then $c =$

If $c = 16$, then $k =$

5. $30b = 7\frac{1}{2}z$

Unit rates:

If $b = 2$, then $z =$

If $z = 5$, then $b =$

6. $9p = 2\frac{1}{4}q$

Unit rates:

If $p = 15$, then $q =$

If $q = 20$, then $p =$

Re-Engage

Unit 3 Lesson 12: Finding Rates



Name: _____

Date: _____

Model

Richard drives 1,515 miles in 2.4 weeks.

Directions: Calculate the unit rate

Step 1 – Divide the 1,515 miles that Richard drove by the 2.4 weeks he was driving.

Step 2 – The unit rate is 631.25 miles per week.

Structured Guided Practice

Directions: Calculate the unit rate.

1. A rocket travels 85 miles in $\frac{2}{3}$ minute.

2. Jimmy makes \$100.50 mowing lawns for 30 days.

Re-Engage

Unit 3 Lesson 12: Finding Rates



Student Practice

Directions: Calculate the unit rate.

1. Walnuts cost \$20.85 fore 3 pounds	2. Brody can bake $6\frac{3}{4}$ cakes for every 3 cups of flour.
3. Joan can answer 12 questions of a math test in 15 minutes.	4. 62 ounces of almonds cost \$12.50
5. Lucy saves \$176 in 8 months.	6. Craig can bike 35 miles in 2 hours.

Extra Practice

Unit 3 • Lesson 12: Determine Proportional Relationships

Name: _____

Date: _____

Directions: Determine if there is a proportional relationship. If so, write in $y=kx$ form.

- | | |
|---|--|
| 1. The 2015 Formula 1 race car can accelerate to 35 mph in 1 second. | 2. A discount warehouse mega store sells a soft drink in two container options. A twelve pack of soda for \$2.52 or a 20 can option for \$4.20 |
| 3. Sandra is mixing raisins and cashews. She mixes $\frac{1}{3}$ a cup of raisins with $\frac{2}{5}$ a cup of cashews. Then she mixes 30 cups of raisins with 36 cups of cashews. | 4. A sequoia is 10 years old and 120 feet tall. A douglas fir pine tree is 15 years old and 30 feet tall. |
| 5. One yogurt brand contains 3 ounces of cultures in their 4-ounce yogurt cup. Another brand contains 10.5 ounces of cultures in a 14-ounce container. | 6. After running 1.5 hours, they are 5 miles from home. After 5 hours running, they are 13 miles from home. |

Integers: Subtraction
Fluency A
 (70 items)

Name _____ Date _____

$-6 - -6 =$	$-6 - -2 =$	$6 - -7 =$	$-2 - -9 =$	$-4 + -6 =$	$-2 - 4 =$	$-9 - 8 =$
$-4 - -8 =$	$3 - -4 =$	$-7 - -6 =$	$-8 - -3 =$	$-3 - -7 =$	$5 - -2 =$	$7 - -6 =$
$-3 - -5 =$	$-5 - -5 =$	$-9 - -7 =$	$7 - -9 =$	$-6 - -4 =$	$-6 - 8 =$	$-2 - -3 =$
$-7 - -7 =$	$-5 - 7 =$	$-9 - 6 =$	$0 - 6 =$	$-8 - 5 =$	$-6 - 9 =$	$-5 - 4 =$
$4 - -4 =$	$8 - -8 =$	$9 - -3 =$	$-7 - -8 =$	$8 - -1 =$	$-3 - 2 =$	$-4 - -3 =$
$8 - -8 =$	$8 - -4 =$	$-9 - 9 =$	$-7 - -5 =$	$-9 - 1 =$	$-8 - 6 =$	$-2 - -8 =$
$-2 - 7 =$	$-7 - 3 =$	$3 - -8 =$	$-9 - 2 =$	$3 - -9 =$	$-4 - -5 =$	$-9 - -4 =$
$-5 - 6 =$	$-9 - -5 =$	$-2 - 2 =$	$6 - -1 =$	$-6 - -5 =$	$-8 - -9 =$	$7 - -4 =$
$-2 - 6 =$	$5 - -3 =$	$-9 - 4 =$	$8 - -2 =$	$2 - -7 =$	$-4 - 2 =$	$-3 - -6 =$
$5 - -9 =$	$-2 - -5 =$	$6 - -3 =$	$-4 - 9 =$	$-5 - 8 =$	$-3 - 3 =$	$4 - -7 =$

Integers: Subtraction
Fluency B
 (70 items)

Name _____ Date _____

$-5 - 6 =$	$-9 - -5 =$	$-2 - 2 =$	$6 - -1 =$	$-6 - -5 =$	$-8 - -9 =$	$7 - -4 =$
$-5 - -9 =$	$-2 - -5 =$	$6 - -3 =$	$-4 - 9 =$	$-5 - 8 =$	$-3 - 3 =$	$4 - -7 =$
$-2 - 6 =$	$5 - -3 =$	$-9 - 4 =$	$8 - -2 =$	$2 - -7 =$	$-4 - 2 =$	$-3 - -6 =$
$-6 - -6 =$	$-6 - -2 =$	$6 - -7 =$	$-2 - -9 =$	$-4 - -6 =$	$-2 - 4 =$	$-9 - 8 =$
$-4 - -8 =$	$3 - -4 =$	$-7 - -6 =$	$-8 - -3 =$	$-3 - -7 =$	$5 - -2 =$	$7 - -6 =$
$-3 - -5 =$	$-5 - -5 =$	$-9 - -7 =$	$7 - -9 =$	$-6 - -4 =$	$-6 - 8 =$	$-2 - -3 =$
$-7 - -7 =$	$-5 - 7 =$	$-9 - 6 =$	$0 - 6 =$	$-8 - 5 =$	$-6 - 9 =$	$-5 - 4 =$
$4 - -4 =$	$8 - -8 =$	$9 - -3 =$	$-7 - -8 =$	$8 - -1 =$	$-3 - 2 =$	$-4 - -3 =$
$8 - -8 =$	$8 - -4 =$	$-9 - 9 =$	$-7 - -5 =$	$-9 - 1 =$	$-8 - 6 =$	$-2 - -8 =$
$-2 - 7 =$	$-7 - 3 =$	$3 - -8 =$	$-9 - 2 =$	$3 - -9 =$	$-4 - -5 =$	$-9 - -4 =$

Integers: Subtraction
Fluency C
 (70 items)

Name _____ Date _____

$-7 - -7 =$	$-5 - 7 =$	$-9 - 6 =$	$0 - 6 =$	$-8 - 5 =$	$-6 - 9 =$	$-5 - 4 =$
$4 - -4 =$	$8 - -8 =$	$9 - -3 =$	$-7 - -8 =$	$8 - -1 =$	$-3 - 2 =$	$-4 - -3 =$
$8 - -8 =$	$8 - -4 =$	$-9 - 9 =$	$-7 - -5 =$	$-9 - 1 =$	$-8 - 6 =$	$-2 - -8 =$
$-5 - 6 =$	$-9 - -5 =$	$-2 - 2 =$	$6 - -1 =$	$-6 - -5 =$	$-8 - -9 =$	$7 - -4 =$
$-2 - 6 =$	$5 - -3 =$	$-9 - 4 =$	$8 - -2 =$	$2 - -7 =$	$-4 - 2 =$	$-3 - -6 =$
$-5 - -9 =$	$-2 - -5 =$	$6 - -3 =$	$-4 - 9 =$	$-5 - 8 =$	$-3 - 3 =$	$4 - -7 =$
$-6 - -6 =$	$-6 - -2 =$	$6 - -7 =$	$-2 - -9 =$	$-4 - -6 =$	$-2 - 4 =$	$-9 - 8 =$
$-4 - -8 =$	$3 - -4 =$	$-7 - -6 =$	$-8 - -3 =$	$-3 - -7 =$	$5 - -2 =$	$7 - -6 =$
$-3 - -5 =$	$-5 - -5 =$	$-9 - -7 =$	$7 - -9 =$	$-6 - -4 =$	$-6 - 8 =$	$-2 - -3 =$
$-2 - 7 =$	$-7 - 3 =$	$3 - -8 =$	$-9 - 2 =$	$3 - -9 =$	$-4 - -5 =$	$-9 - -4 =$

Integers: Subtraction
Fluency D
 (70 items)

Name _____ Date _____

$-3 - -5 =$	$-5 - -5 =$	$-9 - -7 =$	$7 - -9 =$	$-6 - -4 =$	$-6 - 8 =$	$-2 - -3 =$
$-7 - -7 =$	$-5 - 7 =$	$-9 - 6 =$	$0 - 6 =$	$-8 - 5 =$	$-6 - 9 =$	$-5 - 4 =$
$4 - -4 =$	$8 - -8 =$	$9 - -3 =$	$-7 - -8 =$	$8 - -1 =$	$-3 - 2 =$	$-4 - -3 =$
$8 - -8 =$	$8 - -4 =$	$-9 - 9 =$	$-7 - -5 =$	$-9 - 1 =$	$-8 - 6 =$	$-2 - -8 =$
$-2 - 7 =$	$-7 - 3 =$	$3 - -8 =$	$-9 - 2 =$	$3 - -9 =$	$-4 - -5 =$	$-9 - -4 =$
$-6 - -6 =$	$-6 - -2 =$	$6 - -7 =$	$-2 - -9 =$	$-4 - -6 =$	$-2 - 4 =$	$-9 - 8 =$
$-4 - -8 =$	$3 - -4 =$	$-7 - -6 =$	$-8 - -3 =$	$-3 - -7 =$	$5 - -2 =$	$7 - -6 =$
$-5 - 6 =$	$-9 - -5 =$	$-2 - 2 =$	$6 - -1 =$	$-6 - -5 =$	$-8 - -9 =$	$7 - -4 =$
$-5 - -9 =$	$-2 - -5 =$	$6 - -3 =$	$-4 - 9 =$	$-5 - 8 =$	$-3 - 3 =$	$4 - -7 =$
$-2 - 6 =$	$5 - -3 =$	$-9 - 4 =$	$8 - -2 =$	$2 - -7 =$	$-4 - 2 =$	$-3 - -6 =$

Integers: Subtraction
Fluency A
 (70 items)

Name _____ Date _____

$-6 - -6 =$	$-6 - -2 =$	$6 - -7 =$	$-2 - -9 =$	$-4 + -6 =$	$-2 - 4 =$	$-9 - 8 =$
$-4 - -8 =$	$3 - -4 =$	$-7 - -6 =$	$-8 - -3 =$	$-3 - -7 =$	$5 - -2 =$	$7 - -6 =$
$-3 - -5 =$	$-5 - -5 =$	$-9 - -7 =$	$7 - -9 =$	$-6 - -4 =$	$-6 - 8 =$	$-2 - -3 =$
$-7 - -7 =$	$-5 - 7 =$	$-9 - 6 =$	$0 - 6 =$	$-8 - 5 =$	$-6 - 9 =$	$-5 - 4 =$
$4 - -4 =$	$8 - -8 =$	$9 - -3 =$	$-7 - -8 =$	$8 - -1 =$	$-3 - 2 =$	$-4 - -3 =$
$8 - -8 =$	$8 - -4 =$	$-9 - 9 =$	$-7 - -5 =$	$-9 - 1 =$	$-8 - 6 =$	$-2 - -8 =$
$-2 - 7 =$	$-7 - 3 =$	$3 - -8 =$	$-9 - 2 =$	$3 - -9 =$	$-4 - -5 =$	$-9 - -4 =$
$-5 - 6 =$	$-9 - -5 =$	$-2 - 2 =$	$6 - -1 =$	$-6 - -5 =$	$-8 - -9 =$	$7 - -4 =$
$-2 - 6 =$	$5 - -3 =$	$-9 - 4 =$	$8 - -2 =$	$2 - -7 =$	$-4 - 2 =$	$-3 - -6 =$
$5 - -9 =$	$-2 - -5 =$	$6 - -3 =$	$-4 - 9 =$	$-5 - 8 =$	$-3 - 3 =$	$4 - -7 =$