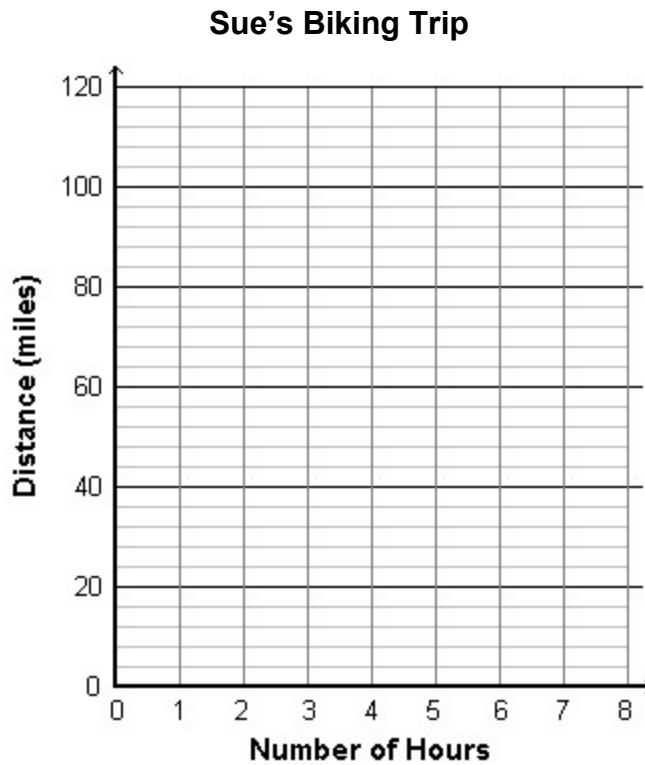**6.RP.3 Study Guide**

1. ✏️ **Use pencil and paper to answer the question.**

Complete the table. Graph the data and connect the plotted points.
Sue's biking speed is 14 miles per hour.

Rule: Miles = 14 ∗ number of hours

Number of Hours (*h*)	Miles (14 ∗ *h*)
0	0
1	14
2	
3	
5	
7	98
8	

Sue's Biking Trip

6.RP.3 Study Guide

2. ✏️ **Use pencil and paper to answer the question.**

Complete the rate table. Use the table to write an open proportion.
Then solve the proportion.

A species of bamboo grows at a rate of 3 inches every 9 hours.
About how many hours does this species take to grow 9 inches?

inches	1	3	4	6	
hours		9			1

$$\frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}}$$

_____ hours

3. ✏️ **Use pencil and paper to answer the question.**

Complete the rate table. Use the table to write an open proportion.
Then solve the proportion.

A species of bamboo grows at a rate of 3 inches every 9 hours.
About how many hours does this species take to grow 8 inches?

inches	1	3	5	6	
hours		9			1

$$\frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}}$$
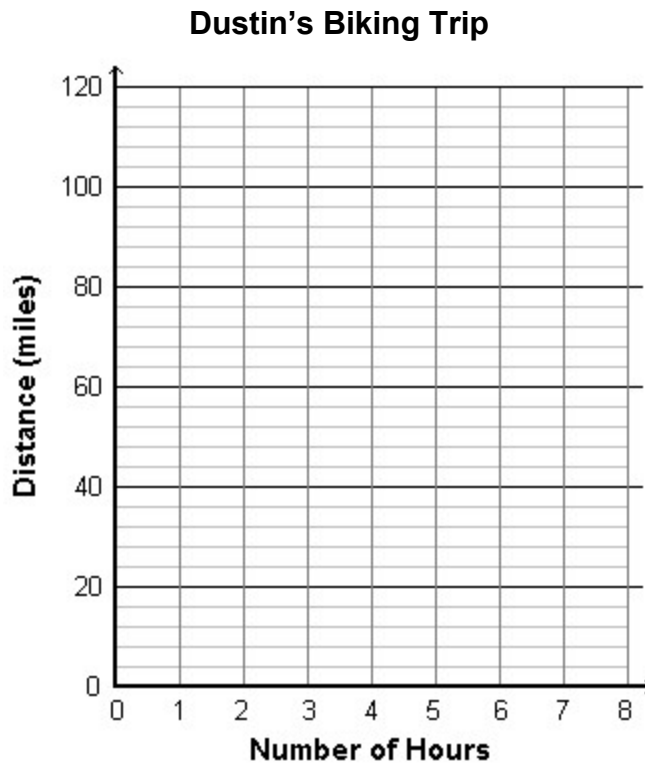
_____ hours

6.RP.3 Study Guide

4. ▭ **Use pencil and paper to answer the question.**

Complete the table. Graph the data and connect the plotted points.
Dustin's biking speed is 14 miles per hour.

Rule: Miles = 14 ✱ number of hours

Number of Hours (h)	Miles (14 ✱ h)
0	0
1	14
2	
3	
4	
7	98
8	

Dustin's Biking Trip

5. ▭ **Use pencil and paper to answer the question.**
Noel gets paid $50 per week to help care for his younger brothers. Michael gets paid $60 per week mowing neighbors' lawns.

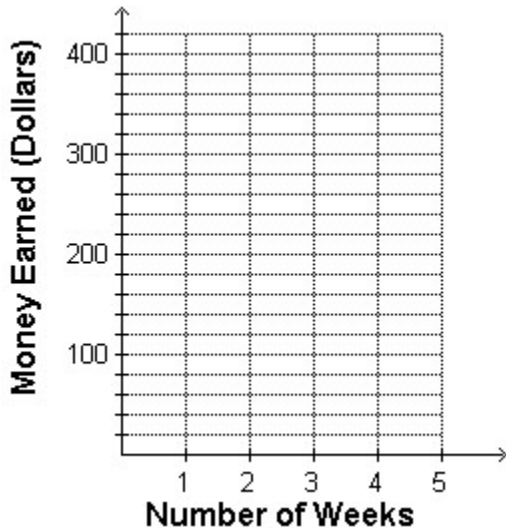**a.** Complete the tables to show their earnings.

Noel's Earnings

Number of Weeks	Total Earned
1	$50
2	$100
3	$150
4	$200
5	$250

Michael's Earnings

Number of Weeks	Total Earned
1	$60
2	$120
3	$180
4	$240
5	$300

6.RP.3 Study Guide

    b. Plot the points and extend lines through the points to show Noel's and Michael's earnings.

Noel's and Michael's Earnings

    What is the difference in their earnings...

    c. After 1 week? _____

    d. After 2 weeks? _____

    e. After 3 weeks? _____

    f. After 4 weeks? _____

    g. After 5 weeks? _____

6. ▭ **Use pencil and paper to answer the question.**

Jake earns $540 for 40 hours of work.
Fill in the rate table.

hours	10	20	30
amount ($)	135.00		

At this rate, how much will Jake earn for 55 hours of work?

_____

6.RP.3 Study Guide

7. 🖎 **Use pencil and paper to answer the question.**

Jake earns $460 for 40 hours of work.
Fill in the rate table.

hours	10	20	30
amount ($)	115.00		

At this rate, how much will Jake earn for 55 hours of work?

_____

8. 🖎 **Use pencil and paper to answer the question.**
Complete.
a. 20% of 20   = _____
b. 75% of 12   = _____
c. 11% of 1,000 = _____
d. 30% of 400   = _____

9. 🖎 **Use pencil and paper to answer the question.**
Write a proportion to solve the problem below.

10% of what number is 73?

10% of _____ is 73.

Enter the appropriate value to answer the question or solve the problem.

10. 99 is 18% of what number?
    99 is 18% of _____.

11. 🖎 **Use pencil and paper to answer the question.**
Complete.
a. 20% of 80   = _____
b. 75% of 68   = _____
c. 66% of 1,000 = _____
d. 30% of 700   = _____

6.RP.3 Study Guide

12. ▭ **Use pencil and paper to answer the question.**
Write a proportion to solve the problem below.

50% of what number is 73?

$$\frac{\boxed{}}{\boxed{}} \quad \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}}$$

50% of _____ is 73.

Enter the appropriate value to answer the question or solve the problem.

13. Find 56% of 50.

56% of 50 is _____.

14. Find 44% of 25.

44% of 25 is _____.

15. Find the value of t so the ratio is expressed in terms of a common unit.
$$\frac{6 \text{ days}}{5 \text{ weeks}} = \frac{6 \text{ days}}{t \text{ days}}$$
$t =$ _____

16. Find the value of t so the ratio is expressed in terms of a common unit.
$$\frac{5 \text{ days}}{3 \text{ weeks}} = \frac{5 \text{ days}}{t \text{ days}}$$
$t =$ _____

Enter the appropriate word(s) to complete the statement.

17. Convert.
568 cm = _____ mm

18. Convert.
110 cm = _____ mm

19. Find the value of x so the ratio is expressed in terms of a common unit.

45 seconds:58 minutes = 45 seconds:x seconds

$x =$ _____

6.RP.3 Study Guide

Indicate the answer choice that best completes the statement or answers the question.

___ 20. Which rate is equivalent to 130 kilometers in 2 hr 30 min? Fill in the circle next to the best answer.
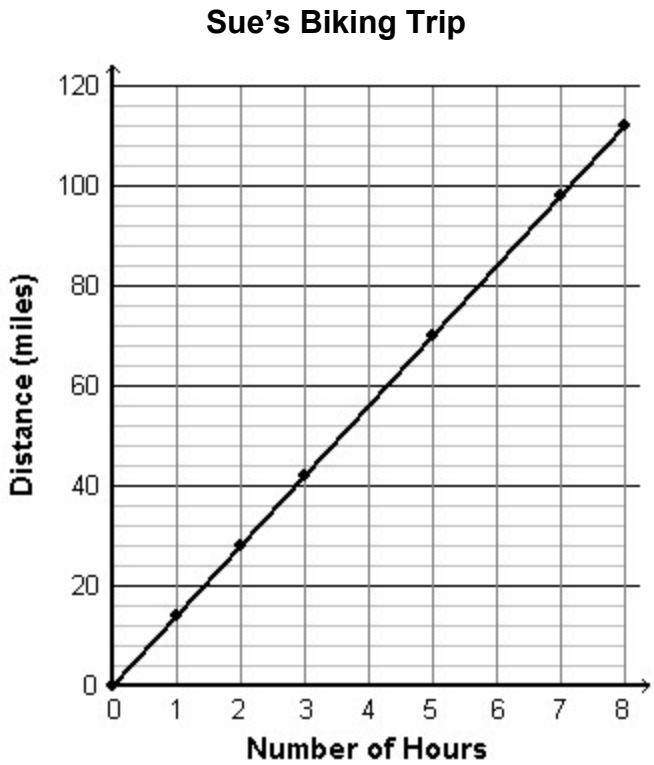
    a. 182 km in 3 hr

    b. 390 km in 7 hr

    c. 65 km in $1\frac{1}{2}$ hr

    d. 260 km in 5 hr

6.RP.3 Study Guide

Answer Key

1.

Hours	Miles
0	0
1	14
2	28
3	42
5	70
7	98
8	112

Sue's Biking Trip

2.

inches	1	3	4	6	$\frac{1}{3}$
hours	3	9	12	18	1

$$\frac{\text{inches}}{\text{hours}} \quad \frac{3}{9} = \frac{9}{h}$$

27 hours

6.RP.3 Study Guide

3.

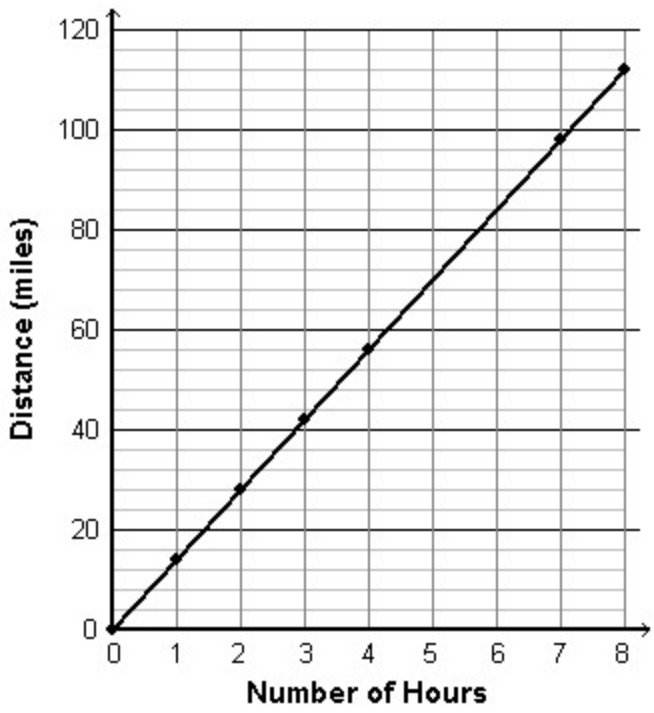| inches	1	3	5	6	$\frac{1}{3}$
hours	3	9	15	18	1

$$\frac{\text{inches}}{\text{hours}} \quad \frac{3}{9} = \frac{8}{h}$$

24 hours

4.

Hours	Miles
0	0
1	14
2	28
3	42
4	56
7	98
8	112

Dustin's Biking Trip

6.RP.3 Study Guide

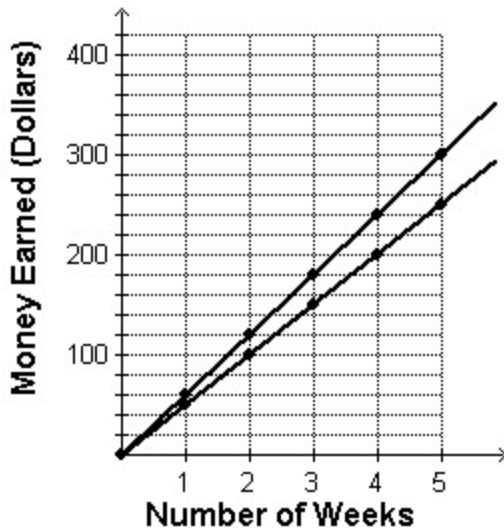5. **a.**

Noel's Earnings		Michael's Earnings	
Number of Weeks	**Total Earned**	**Number of Weeks**	**Total Earned**
1	$50	1	$60
2	$100	2	$120
3	$150	3	$180
4	$200	4	$240
5	$250	5	$300

   b.

Noel's and Michael's Earnings

   c. $10
   d. $20
   e. $30
   f. $40
   g. $50

6.

hours	10	20	30
amount ($)	135.00	270.00	405.00

Jake will earn $742.50 for 55 hours of work.

6.RP.3 Study Guide

7.

hours	10	20	30
amount ($)	115.00	230.00	345.00

Jake will earn $632.50 for 55 hours of work.

8. **a.** 4
   b. 9
   c. 110
   d. 120

$$\frac{\text{part}}{\text{whole}} \quad \frac{10}{100} = \frac{73}{x}$$

9.
   730

10. 550

11. **a.** 16
    b. 51
    c. 660
    d. 210

$$\frac{\text{part}}{\text{whole}} \quad \frac{50}{100} = \frac{73}{x}$$

12.
   146

13. 28

14. 11

15. 35

16. 21

17. 5,680
    5680

18. 1,100
    1100

6.RP.3 Study Guide

19. 3,480

    3480

20. d