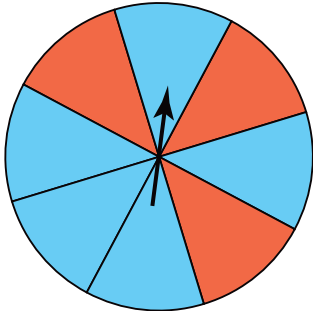


## What Should I Be Able to Do?

- 4.1** 1. Write 2 equivalent ratios for each ratio.

- a) 3:5                      b) 36:42  
c) 15:10                  d) 225:35

2. Elise made up a game with this spinner.

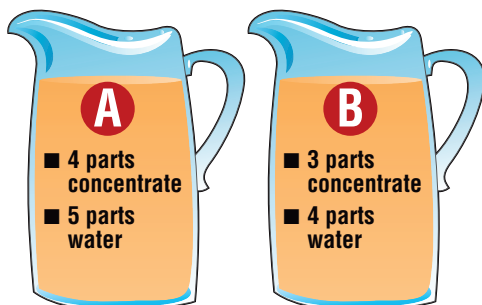


If the pointer lands on red, the player loses a turn.

Elise made a larger spinner. It had 20 sectors, 12 of which are red.

- a) Are the spinners equivalent?  
b) If your answer to part a is yes, justify your answer.  
If your answer is no, describe a spinner that would be equivalent to the first spinner.

3. Orange juice is mixed from concentrate and water.



Which mix is stronger?  
Justify your answer.

- 4.2** 4. Determine the value of each variable.

- a)  $3:4 = 9:n$   
b)  $a:35 = 4:20$   
c)  $10:20 = 21:e$   
d)  $20:m = 15:18$

5. A recipe for salad dressing calls for 4 parts oil to 1 part vinegar. Allie used 60 mL of vinegar. What volume of oil does she need?

6. A recipe that makes 5 dozen cookies calls for 4 eggs and 2 cups of flour.  
a) Wolfgang has only 3 eggs. How much flour should he use?  
b) How many cookies will he make?

- 4.3** 7. Determine each unit rate.

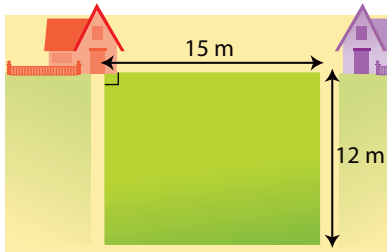
- a) 240 km driven in 5 h  
b) 105 words typed in 3 min  
c) \$2.80 for a 7-min call  
d) \$4.74 for 3 kg of oranges  
e) 240 pages printed in 8 min

8. Which toothpaste is the better buy?  
Show your work.

 <b>85 mL for</b>	<b>\$1.39</b> <b>A</b>
 <b>130 mL for</b>	<b>\$1.99</b> <b>B</b>

- 4.4** 9. The mass of grass seed needed to seed a yard depends on the area of the yard. Five kilograms of seed cover  $100 \text{ m}^2$ .

a) How much seed is needed for this lawn?



b) Seed is sold in 8-kg bags. One bag of seed costs \$21.20. How much will it cost to seed the lawn in part a?

10. Paige works after school picking apples. It took her 4 days to pick 9 rows of trees.
- a) At this rate, how long will it take her to pick 20 rows of trees? Explain.
- b) Paige picked for 10 days. How many rows did she pick?

- 4.5** 11. Mr. O'Shea drove 600 km on 50 L of gas.
- a) How far could he drive on 30 L of gas?
- b) How much gas would he need to travel 420 km?
- c) What strategy did you use to solve each problem? Explain your strategy and why you chose it.

12. A photocopier can print 12 copies in 48 s. At this rate, how many copies can it print in 1 min?

- 4.6** 13. Determine each percent.

- a) 20% of \$56.99  
b) 45% of \$118.56  
c) 30% of \$89.99  
d) 25% of \$37.88

14. A winter jacket is regularly priced at \$79.99. It is on sale for 35% off.

- a) What is the sale price?  
b) What does the customer pay, including taxes?

15. The Canadian Radio and Television Commission requires 60% of the programming on CBC to be Canadian content. The CBC broadcasts from 6 a.m. one day to 2 a.m. the next each day. How many hours of programming each week are Canadian content?



16. Sheila put \$350 in a savings account for 10 months. The annual interest rate was 3%.
- a) How much simple interest did the money earn?  
b) How much money was in the account after 10 months?
17. James borrowed \$1500 for 8 months. The annual interest rate was 9%.
- a) How much simple interest did James pay?  
b) What did the loan cost James?

**Practice Test**

Multiple Choice: Choose the correct answer for questions 1 and 2.

1. The ratio of length to width of a rectangle is 5:3.  
Which dimensions could be those of the rectangle?  
A. 9 cm by 12 cm  
B. 16 km by 10 km  
C. 10 m by 6 m  
D. 9 mm by 16 mm
2. A 4-L can of paint covers an area of  $32 \text{ m}^2$ .  
What area will a 10-L can of paint cover?  
A.  $40 \text{ m}^2$   
B.  $60 \text{ m}^2$   
C.  $80 \text{ m}^2$   
D.  $320 \text{ m}^2$

Show your work for questions 3 to 6.

**3. Knowledge and Understanding**

Determine the value of each variable.

a)  $2:10 = 5:a$

c)  $18:30 = 12:c$

b)  $30:42 = b:7$

d)  $\frac{n}{4} = \frac{21}{10}$

**4. Communication** Sun Li bought 12 oranges for \$6.48.

How many oranges could she buy with \$10.00?

How many different ways could you find out?

Explain each way.

**5. Application** Jenna put \$2500 in a savings account.

The annual interest rate was 2%.

a) How much simple interest did the money earn in 3 months?

b) How much money was in the account after 3 months?

**6. Thinking** The sun is shining.

You have a measuring tape and a friend to help you. How could you determine the height of a flagpole?

Explain your strategy.

