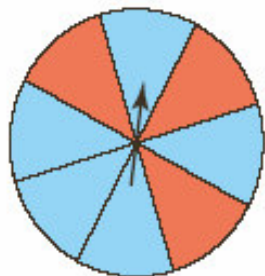


What Should I Be Able to Do?

- 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.

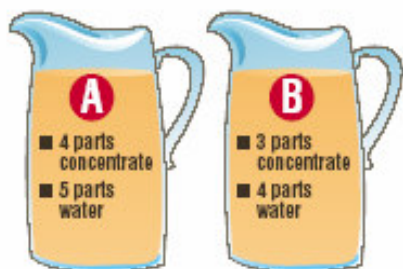


If the pointer lands on red, the player loses a turn.

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.

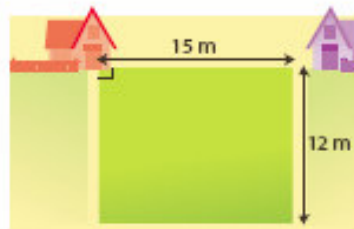
- a) 240 km driven in 5 h
b) 105 words typed in 3 min
c) \$2.80 for a 7-min call
d) \$4.74 for 3 kg of oranges
e) 240 pages printed in 8 min

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



- 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 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.

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

Show your work for questions 3 to 6.

3. Knowledge and Understanding

Determine the value of each variable.

a) $2:10 = 5:a$

b) $30:42 = b:7$

c) $18:30 = 12:c$

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.

