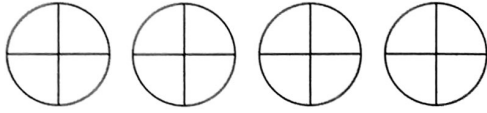


3.2 Imperial Lengths and References

Focus: developing number sense, approximating and measuring lengths

Warm Up

1. a) Shade in each of the following fractions of a circle.

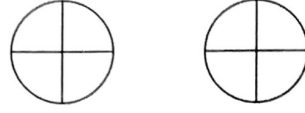


$\frac{1}{4}$ $\frac{1}{2}$ $\frac{3}{4}$ $\frac{2}{4}$

- b) Circle the pair of equivalent fractions.

$\frac{1}{4}$ $\frac{1}{2}$ $\frac{3}{4}$ $\frac{2}{4}$

2. a) Shade in each of the following fractions of a circle.



$\frac{1}{4}$ $\frac{3}{4}$

b) $\frac{1}{4} + \frac{3}{4} =$ _____

3. Count by 6s.

6 , _____ , _____ ,
 _____ , _____ , _____

4. A six-pack of bottled mineral water costs \$7.20. What is the unit price?

Estimating and Measuring Imperial Lengths

1. Look at a tape measure with imperial units. Find the following relationships.

a) How many inches are in one foot? _____

b) How many inches are in half a foot? _____

c) How many inches are in two feet? _____

2. Convert each measurement to the unit specified. The first one is done for you.

a) 2 ft = 24 in. b) 3 ft = _____ in.

c) 3 ft = 1 _____ d) 6 ft = _____ yd

e) 6 in. = _____ ft f) $1\frac{1}{2}$ ft = _____ in.

Look at page 69 for a reminder about imperial units.

3. Circle the better measurement.**a)** The length of this book is about

1 in. 1 ft

b) The diameter of a CD is about

12 in. 4 in.

c) The length of a car is about

10 ft 10 yd

d) The width of a fingernail is about

1" 1'

e) The height of a table is about

2 ft 6 ft

f) The diameter of a skateboard wheel is about $\frac{1}{2}$ in. 3 in.**4.** State the imperial unit that you might use to measure each of the following items. The first one is done for you.**a)** a ceiling tile feet**b)** the length of a pencil _____**c)** the length of a football field _____**d)** the height of a cat _____**e)** a city block _____**f)** the height of a fence _____**g)** the length of a snowboard _____**h)** the length of your hair _____

5. Measure each of the following lines to the nearest $\frac{1}{4}$ in. Write each length with the correct units at the end of the line. The first one is done for you.

a) _____ $2\frac{3}{4}$ in.

b) _____

c) _____

d) _____

e) _____

f) _____

g) _____

h) _____

i) _____

j) _____

6. Measure the width and the length of this workbook in inches.

Width = _____ in. Length = _____ in.

7. Using a straight edge that is not a ruler, draw lines of approximately the following lengths.

a) 1 in.

b) 2 in.

c) 6 in.

d) $\frac{1}{2}$ in.

e) $\frac{1}{4}$ in.

8. Measure each line in #7. How close were you?

- As you saw in Chapter 2, estimating common distances is easier if you can approximate distances using your body or your surroundings.
9. Collect some personal references for estimating imperial distances.

Measurement	Personal Reference
1 in.	
2 in.	
3 in.	
6 in.	
1 ft	
2 ft	
3 ft (also called one _____)	
	Your height

10. Measure, if possible, the objects listed in the table. Then, complete the table to collect more personal references for estimating imperial distances.

Measurement	Personal Reference
	The height of a door
	The length of a floor tile
	The length of your arm
	The length of a ceiling tile
	A football field

Check Your Understanding

How could you use your collection of personal references to estimate the height of your classroom?
