

Fourth Grade
Answer Key
Unit 6: Measurement

Page 2 Blackline Masters
Page 15 Cards

Problem of the Day

Lesson 1

Write the fraction below in the simplest form.

$$\frac{7}{14} \quad \frac{1}{2}$$

Lesson 4

Complete the conversions below.

$$2 \text{ ft.} = \underline{24} \text{ in.}$$

$$4 \text{ yd.} = \underline{12} \text{ ft.}$$

$$5 \text{ yd.} = \underline{180} \text{ in.}$$

Lesson 2

Which unit of weight would you use to describe the weight of a car?

- A. ounce
- B. pound
- C. ton**

Lesson 5

Determine the appropriate unit of measurement for the capacity of the jar.

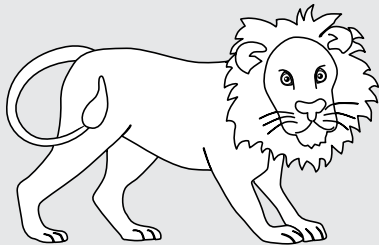
- A. 5 gallons
- B. 2 cups**
- C. 5 pints
- D. 2 quarts



Lesson 3

Determine the appropriate unit of measurement for the length of the lion.

- A. 5 feet**
- B. 5 inches
- C. 5 miles
- D. 5 yards



Problem of the Day

Lesson 6

Complete the conversions below.

$$1 \text{ gal.} = \underline{16} \text{ c.}$$

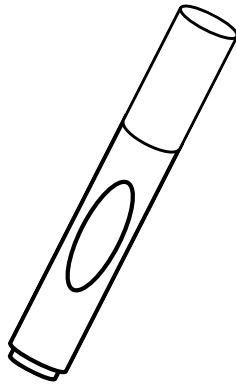
$$4 \text{ qt.} = \underline{8} \text{ pt.}$$

$$8 \text{ c.} = \underline{2} \text{ qt.}$$

Lesson 7

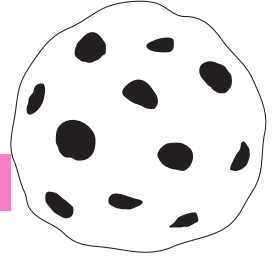
Determine the appropriate unit of measurement for the weight of the marker.

- A. 3 tons
- B. 3 ounces**
- C. 6 pounds
- D. 1 ton



Lesson 9

Determine the appropriate unit of measure.



- A. 10 millimeters**
- B. 10 meters
- C. 10 centimeters
- D. 10 kilometers

Lesson 10

Complete the conversions below.

$$2 \text{ cm.} = \underline{20} \text{ mm.}$$

$$5 \text{ m.} = \underline{500} \text{ cm.}$$

$$2 \text{ km.} = \underline{2,000} \text{ m.}$$

Lesson 8

Complete the conversions below.

$$5 \text{ lbs.} = \underline{80} \text{ oz.}$$

$$3 \text{ T.} = \underline{6,000} \text{ lbs.}$$

$$32 \text{ oz.} = \underline{2} \text{ lbs.}$$

Problem of the Day

Lesson 11

Determine the appropriate unit of measurement for the capacity of the watering can.

- A. 10 liters
- B. 10 milliliters
- C. 2 liters**
- D. 2 milliliters



Lesson 14

Complete the conversions below.

$$2 \text{ kg.} = \underline{2,000} \text{ g.}$$

$$5,000 \text{ mg.} = \underline{5} \text{ g.}$$

$$6,000 \text{ g.} = \underline{6} \text{ kg.}$$

Lesson 12

Complete the conversions below.

$$1 \text{ L.} = \underline{1,000} \text{ mL.}$$

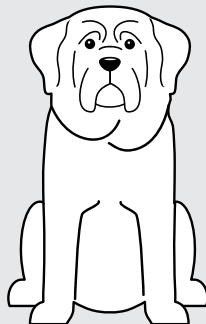
$$4,000 \text{ mL.} = \underline{4} \text{ L.}$$

$$8 \text{ L.} = \underline{0.0008} \text{ mL.}$$

Lesson 13

Determine the appropriate unit of measurement for the mass of the dog.

- A. 50 kilograms
- B. 50 grams**
- C. 10 milligrams
- D. 10 grams



Lesson 15

Walton spent 3 hours and 45 minutes volunteering for his school. If Walton finished volunteering at 4:05 p.m., what time did he start volunteering?

Answer: 12:20 p.m.

Problem of the Day

Lesson 16

Doug went shopping at 9:45 a.m. He spent 1 hour and 35 minutes looking for a new pair of shoes. What time did Doug finish looking for shoes?

Answer: 11:20 a.m.

Lesson 17

Find the area and perimeter of the square below.



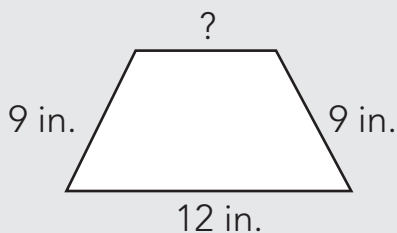
Perimeter: 44 in.

Area: 121 sq. in.

Lesson 18

Find the length of the missing side of the figure below.

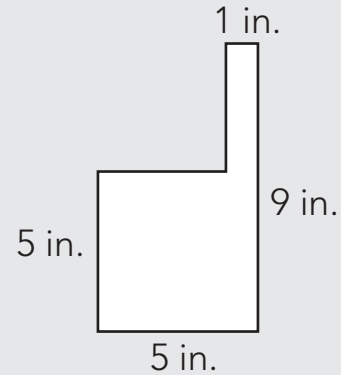
Perimeter = 37 in.



Answer: 7 in.

Lesson 19

Find the area and perimeter of the figure below.

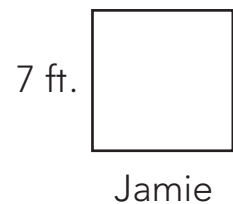
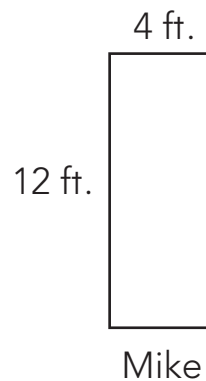


Perimeter: 28 in.

Area: 29 sq. in.

Lesson 20

Mike and Jamie both drew plans for their gardens. Who will have a garden with a larger area? How much larger will the area be?

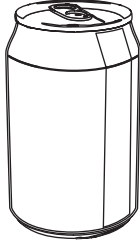


Answer: Jamie's garden is larger by 1 square foot.

Pre-Assessment

Read each question below and solve.

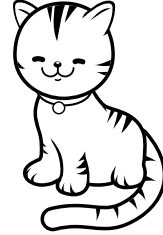
1. Identify the most appropriate unit of measurement for the object below.



capacity of a can of soda

- A. gallons
- B. cups
- C. feet
- D. kilograms**

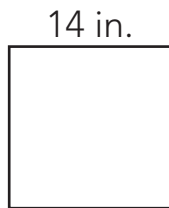
2. Identify the most appropriate unit of measurement for the cat below.



weight of a cat

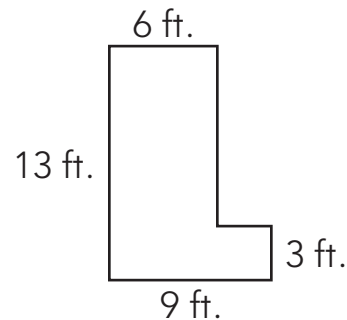
- A. tons
- B. fluid ounces
- C. pounds**
- D. meters

3. Find the perimeter of the figure below.



- A. 42 inches
- B. 56 inches**
- C. 168 inches
- D. 196 inches

4. Find the area of the figure below.



- A. 27 ft.²
- B. 78 ft.²
- C. 87 ft.²**
- D. 93 ft.²

Solve the problem below.

5. Tabitha has dance class every Thursday from 7:05 p.m. until 8:45 p.m. How much time does Tabitha spend in dance class every Thursday?
- A. 2 hours and 5 minutes
 - B. 1 hour and 50 minutes
 - C. 1 hour and 45 minutes
 - D. 1 hour and 40 minutes**

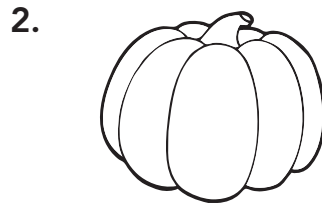
Customary Measurement Quiz

Examine each item below and determine the appropriate customary measurement.



capacity of pitcher

- A. 2 pints
- B. 5 quarts**
- C. 1 cup
- D. 3 gallons



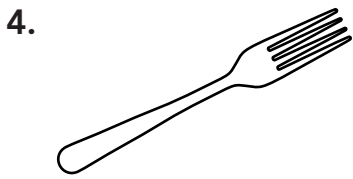
weight of pumpkin

- A. 15 ounces
- B. 15 pounds**
- C. 5 ounces
- D. 1 ton



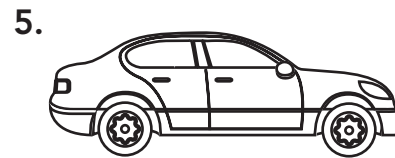
height of one-story house

- A. 9 inches
- B. 9 miles
- C. 9 yards
- D. 9 feet**



length of fork

- A. 1 inch
- B. 1 foot
- C. 9 feet
- D. 9 inches**



weight of car

- A. 2 pounds
- B. 12 ounces
- C. 2 tons**
- D. 12 pounds



capacity of pond

- A. 20 gallons**
- B. 20 pints
- C. 20 quarts
- D. 20 fluid ounces

Use the input/output table to complete each conversion.

7.

Input	Output
1 T. = 2,000 lb.	
8T. = 16,000 lb.	

8.

Input	Output
2 qt. = 8 c.	
4 qt. = 32 c.	

9.

Input	Output
3ft. = 36 in.	
8 ft. = 96 in.	

10.

Input	Output
5 yd. = 15 ft.	
15 yd. = 45 ft.	

11.

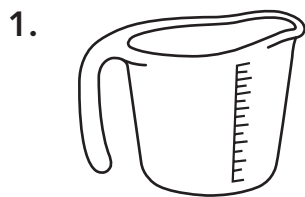
Input	Output
16 oz. = 1 lb.	
128 oz. = 8 lb.	

12.

Input	Output
1 gal. = 16 c.	
9 gal. = 144 c.	

Metric Measurement Quiz

Examine each item below and determine the appropriate metric measurement.



capacity of measuring cup

- A. 5 milliliters**
- B. 5 liters
- C. 200 milliliters
- D. 100 liters



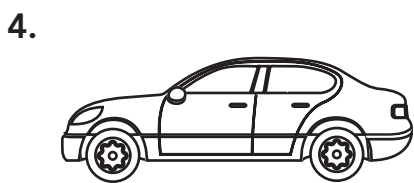
length of a state

- A. 600,000 meters
- B. 600,000 kilometers
- C. 500 meters
- D. 500 kilometers**



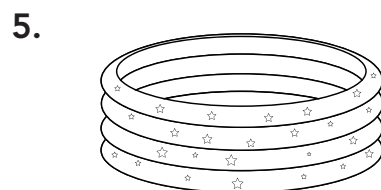
mass of crayon

- A. 2 grams
- B. 200 milligrams
- C. 2 kilograms
- D. 2 milligrams**



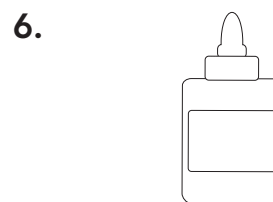
mass of car

- A. 10,000 grams
- B. 10,000 kilograms**
- C. 10,000 milligrams
- D. 1,000 kilograms



capacity of kiddie pool

- A. 500 liters
- B. 500 milliliters
- C. 6,000 liters**
- D. 6,000 milliliters



height of glue bottle

- A. 1 meter
- B. 1 centimeter
- C. 11 meters
- D. 11 centimeters**

Use each Input/Output table to complete the conversion.

7.

Input	Output
5 kg. = 5,000 g.	
<u> 2 </u> kg. = 2,000 g.	

8.

Input	Output
8 L. = 8,000 mL.	
<u> 10 </u> L. = 10,000 mL.	

9.

Input	Output
3 cm. = 30 mm.	
11 cm. = <u> 110 </u> mm.	

10.

Input	Output
9 g. = 9,000 mg.	
<u> 6 </u> g. = 6,000 mg.	

11.

Input	Output
1 m. = 1,000 mm.	
<u> 6 </u> m. = 6,000 mm.	

12.

Input	Output
1 L. = 1,000 mL.	
9 L. = <u> 9,000 </u> mL.	

Elapsed Time

READ THE PROBLEM

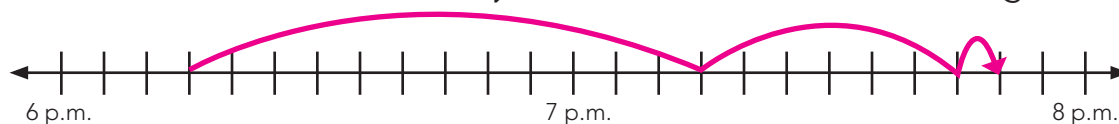
Rachel babysits every Wednesday night at 6:15 p.m. She babysits for 1 hour and 35 minutes. What time does Rachel finish babysitting?

START TIME: **6:15 p.m.** END TIME: **7:50 p.m.** TIME PASSED: **1:35**

STRATEGY #1

Number Line

Use a number line to model the equation and solve for the missing time.



STRATEGY #2

Standard Algorithm

Use an addition or subtraction problem to solve for the end time.

$$6:15 + 1:35 = 7:50$$

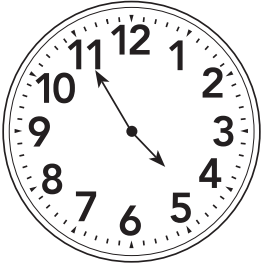
Cut around the dotted line and place into Math Journal

Calculating Time Quiz

Read each word problem below. Identify the times that are given and solve for the elapsed time. Solve by using both a number line and standard algorithm.

1. If Megan started practice at the time on the clock below and practice lasted for 2 hours and 15 minutes, what time did practice end?

Start Time: **4:55** End Time: **7:10**
Elapsed Time: **2:15**



Number Line:

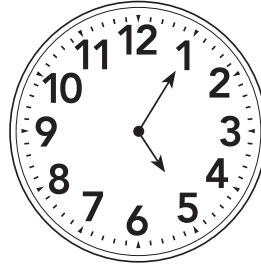


Standard Algorithm:

$$4:55 + 2:15 = 7:10$$

2. Gregg drove for 1 hour and 50 minutes. If he arrived at his destination at the time on the clock below, what time did he start driving?

Start Time: **3:15** End Time: **5:05**
Elapsed Time: **1:50**



Number Line:



Standard Algorithm:

$$5:05 - 1:05 = 3:15$$

3. Courtney had a doctor's appointment at 3:00. If it takes her 35 minutes to get to the doctor's office, what time should she leave her house?

Start Time: **2:25** End Time: **3:00**

Elapsed Time: **0:35**

Number Line:



Standard Algorithm:

$$2:25 + 0:35 = 3:00$$

4. Josh started his homework at 6:45 p.m. He finished his homework at 8:05 p.m. How long did Josh spend on his homework?

Start Time: **6:45 p.m.** End Time: **8:05 p.m.**

Elapsed Time: **1:20**

Number Line:



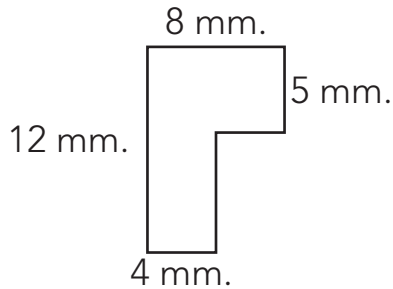
Standard Algorithm:

$$6:45 + 1:20 = 8:05$$

Area and Perimeter Quiz

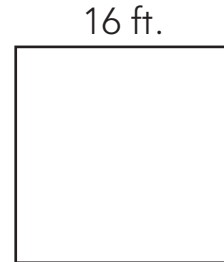
Read each word problem below and solve.

1. What is the area of the figure below?



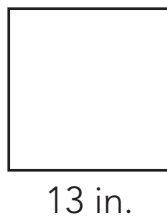
Answer: 68 sq. ft.

2. Find the perimeter of the square below.



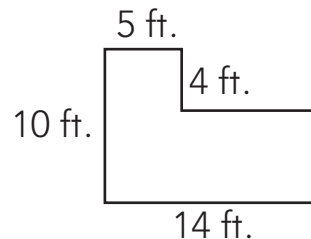
Answer: 64 ft.

3. Find the area of the square below.



Answer: 169 sq. in.

4. What is the perimeter of the figure below?

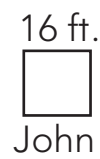


Answer: 48 ft.

5. Jane put a rug in her living room. If one side is 7 feet long and the other side is 15 feet long, what is the perimeter of the rug? (Hint: Draw a model.)

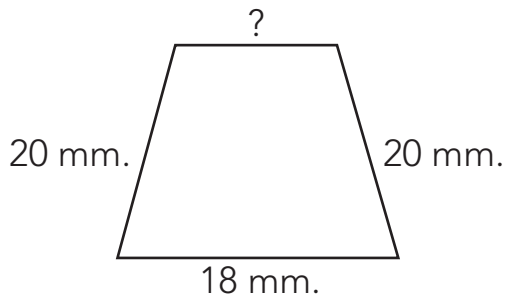
A. 44 feet
B. 89 feet
C. 105 feet
D. 120 feet

6. John and Kylie compared the sizes of their gardens. Which garden has a smaller area? How much smaller is the area?



A. Kylie; 216 ft^2
B. John; 256 ft^2
C. Kylie; 40 ft^2
D. John; 40 ft^2

7. Find the missing side length in the figure below.



Perimeter = 66 mm.

A. 10 mm.
B. 7 mm.
C. 12 mm.
D. 8 mm.

8. Reagan planted a garden in the shape of a rectangle. If one side of the rectangle is 14 feet and the other side is 9 feet, what is the area of Reagan's garden? (Hint: Draw a model.)

Answer: 126 ft.

Assessment

Complete the conversion charts below.

1.

Input	Output
5 kg. = 5,000 g.	
<u>2</u> kg. = 2,000 g.	

2.

Input	Output
8 L. = 8,000 mL.	
<u>10</u> L. = 10,000 mL.	

3.

Input	Output
3 cm. = 30 mm.	
11 cm. = <u>110</u> mm.	

4.

Input	Output
9 g. = 9,000 mg.	
<u>6</u> g. = 6,000 mg.	

5.

Input	Output
1 m. = 1,000 mm.	
<u>6</u> m. = 6,000 mm.	

6.

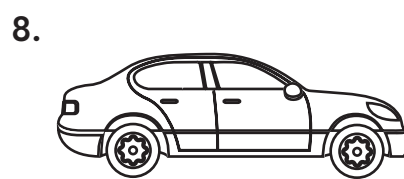
Input	Output
1 L. = 1,000 mL.	
9 L. = <u>9,000</u> mL.	

Determine the appropriate measurement for the images below.



capacity of water bottle

- A. 1 cup
- B. 1 gallon
- C. 1 pint**
- D. 2 quarts



mass of car

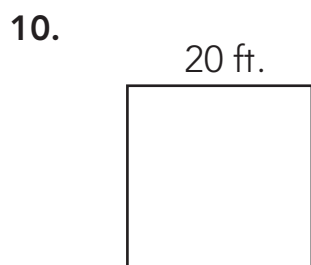
- A. 2,000 kilograms**
- B. 2,000 grams
- C. 20,000 milligrams
- D. 800 grams



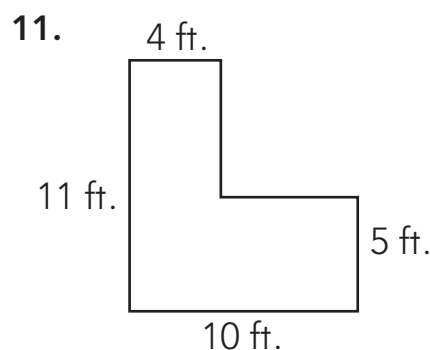
height of BBQ sauce bottle

- A. 1 foot**
- B. 1 inch
- C. 1 yard
- D. 1 mile

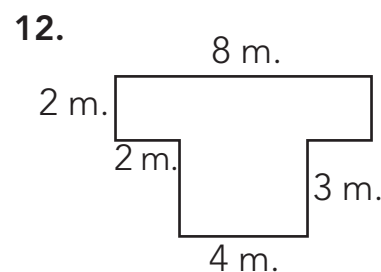
Determine the area and perimeter of the figures below.



Perimeter: 80 ft.
Area: 400 sq. ft.



Perimeter: 42 ft.
Area: 74 sq. ft.



Perimeter: 26 m.
Area: 28 sq. m.

13. Michael drew a square whose sides measured 18 inches. Gina drew a rectangle whose sides measured 16 inches by 13 inches. Whose figure had a smaller perimeter? How much smaller was it? (Hint: Draw a model to solve.)

A. Michael; 14 inches
B. Gina; 14 inches
C. Michael; 116 inches
D. Gina; 116 inches

15. Adam wants to measure the length of a street in his town. Which unit of measure would be the most appropriate?

A. kilometers
B. centimeters
C. meters
D. millimeters

17. Terence arrived at an appointment at 4:15 p.m. He left his house at 3:10 p.m. to get there. How long did it take Terence to get there?

A. 1 hour and 5 minutes
B. 1 hour
C. 55 minutes
D. 50 minutes

19. Ryan has football practice from 6:45 p.m. until 8:30 p.m. How long will Ryan be at practice?

A. 1 hour and 30 minutes
B. 1 hour and 45 minutes
C. 2 hours and 30 minutes
D. 2 hours and 45 minutes

14. Chuck and Kaiden compare the sizes of their gardens. Whose garden has a larger area? How much larger?

A. Kaiden; 18 ft^2
B. Chuck; 18 ft^2
C. Kaiden; 125 ft^2
D. Chuck; 125 ft^2



16. Natalie wants to measure the capacity of her bathtub. Which unit of measure would be the most appropriate?

A. cups
B. quarts
C. gallons
D. pints

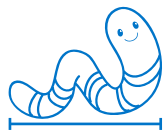
18. Emmy worked on her painting for 2 hours and 25 minutes. If she started working on her painting at 3:50 p.m., what time did she finish working on it?

A. 5:55 p.m.
B. 6:05 p.m.
C. 6:15 p.m.
D. 6:25 p.m.

20. Lilly went on a run for 1 hour and 50 minutes. Lilly finished her run at 7:30 a.m. What time did Lilly start her run?

A. 5:30 a.m.
B. 5:40 a.m.
C. 6:00 a.m.
D. 6:20 a.m.

Examine each item below and determine the appropriate customary measurements.



worm

- A. 3 feet
- B. 3 yards
- C. 3 inches**
- D. 3 miles



tennis ball

- A. 6 yards
- B. 6 inches
- C. 2 inches**
- D. 2 yards



apple

- A. 3 inches**
- B. 10 inches
- C. 10 feet
- D. 3 feet



candle

- A. 10 feet
- B. 6 inches
- C. 6 feet
- D. 10 inches**



popsicle

- A. 2 feet
- B. 10 inches**
- C. 10 feet
- D. 2 inches



marshmallow

- A. 2 inches**
- B. 12 inches
- C. 2 yards
- D. 12 yards

Convert the following customary length measurements.

$$3 \text{ ft.} = \underline{\quad 36 \quad} \text{ in.}$$

$$2 \text{ mi.} = \underline{\quad 3,520 \quad} \text{ yds.}$$

$$5 \text{ yds.} = \underline{\quad 15 \quad} \text{ ft.}$$

$$24 \text{ in.} = \underline{\quad 2 \quad} \text{ ft.}$$

$$6 \text{ ft.} = \underline{\quad 2 \quad} \text{ yds.}$$

$$4 \text{ mi.} = \underline{\quad 7,040 \quad} \text{ yds.}$$

$$48 \text{ in.} = \underline{\quad 4 \quad} \text{ ft.}$$

$$9 \text{ ft.} = \underline{\quad 3 \quad} \text{ yds.}$$

Examine each item below and determine the appropriate customary measurements.



measuring cup

- A. 1 cup**
- B. 1 fluid ounce
- C. 1 gallon
- D. 1 quart



kiddie pool

- A. 15 pints
- B. 15 quarts
- C. 15 fluid ounces
- D. 15 gallons**



BBQ sauce bottle

- A. 2 gallons
- B. 1 pint**
- C. 6 cups
- D. 2 quarts



jug of milk

- A. 1 cup
- B. 1 pint
- C. 1 gallon**
- D. 1 quart



fish bowl

- A. 1 pint
- B. 10 quarts
- C. 2 cups
- D. 6 pints**



glue bottle

- A. 1 gallon
- B. 2 pints
- C. 2 quarts
- D. 12 fluid ounces**

Convert the following customary capacity measurements.

$$4 \text{ pt.} = \underline{\quad 2 \quad} \text{ qt.}$$

$$16 \text{ fl. oz.} = \underline{\quad 2 \quad} \text{ c.}$$

$$1 \text{ gal.} = \underline{\quad 16 \quad} \text{ c.}$$

$$5 \text{ gal.} = \underline{\quad 20 \quad} \text{ qt.}$$

$$10 \text{ qt.} = \underline{\quad 20 \quad} \text{ pt.}$$

$$4 \text{ c.} = \underline{\quad 2 \quad} \text{ pt.}$$

$$6 \text{ qt.} = \underline{\quad 24 \quad} \text{ c.}$$

$$3 \text{ gal.} = \underline{\quad 24 \quad} \text{ pt.}$$

Examine each item below and determine the appropriate customary measurements.



elephant

- A. 2 tons**
- B. 200 pounds
- C. 2,000 ounces
- D. 20 pounds



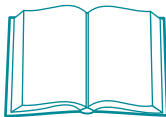
picnic basket

- A. 3 pounds**
- B. 1 ton
- C. 8 ounces
- D. 3 tons



train car

- A. 4 tons**
- B. 10 pounds
- C. 4 ounces
- D. 400 pounds



book

- A. 1 pound**
- B. 1 ounce
- C. 1 ton
- D. 5 ounces



several pieces of popcorn

- A. 2 ounces**
- B. 2 tons
- C. 20 pounds
- D. 2 pounds



video camera

- B. 6 tons
- B. 6 pounds
- C. 6 ounces
- D. 1 pound**

Convert the following customary weight measurements.

$$4 \text{ lbs.} = \underline{64} \text{ oz.}$$

$$32 \text{ oz.} = \underline{2} \text{ lbs.}$$

$$16 \text{ oz.} = \underline{2} \text{ lbs.}$$

$$5 \text{ T.} = \underline{10,000} \text{ lbs.}$$

$$2 \text{ T.} = \underline{4,000} \text{ lbs.}$$

$$6 \text{ lbs.} = \underline{96} \text{ oz.}$$

$$8,000 \text{ lbs.} = \underline{4} \text{ T.}$$

$$10,000 \text{ T.} = \underline{20,000,000} \text{ lbs.}$$

Use the Input/Output Table to complete the conversion.

Input	Output
1 ft.	= 12 in.
4 ft.	= <u>48</u> in.

Input	Output
1 qt.	= 4 c.
8 qt.	= <u>32</u> c.

Input	Output
1 lb.	= 16 oz.
6 lb.	= <u>96</u> oz.

Input	Output
1 yd.	= 3 ft.
12 yd.	= <u>36</u> ft.

Input	Output
4 qt.	= 1 gal.
16 qt.	= <u>4</u> gal.

Input	Output
1 T.	= 2,000 lb.
<u>5</u> T.	= 10,000 lb.

Use the Input/Output Table to complete the conversion.

Input	Output
16 c. = 1 gal.	
64 c. = <u>4</u> gal.	

Input	Output
1 yd. = 36 in.	
7 yds. = <u>252</u> in.	

Input	Output
1 lb. = 16 oz.	
<u>5</u> lb. = 80 oz.	

Input	Output
1 mi. = 1,760 yd.	
8 mi. = <u>14,080</u> yd.	

Input	Output
8 pt. = 16 fl. oz.	
<u>3</u> pt. = 48 fl. oz.	

Input	Output
1 T. = 2,000 lb.	
3 T. = <u>6,000</u> lb.	

Use the Input/Output Table to complete the conversion.

Input	Output
36 in. =	1 yd.
<u>288</u> in. =	8 yd.

Input	Output
1 gal. =	16 c.
<u>6</u> gal. =	96 c.

Input	Output
1 mi. =	5,280 ft.
6 mi. =	<u>31,680</u> ft.

Examine each item below and determine the appropriate metric measurement.



road between 2 towns

- A. 3 kilometers**
- B. 3 centimeters
- C. 3 millimeters
- D. 3 meters



pencil

- A. 8 meters
- B. 8 millimeters
- C. 8 centimeters**
- D. 8 kilometers



cone

- A. 1 meter**
- B. 1 centimeter
- C. 400 meters
- D. 400 centimeters**



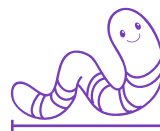
bumblebee

- A. 5 millimeters**
- B. 5 centimeters
- C. 15 kilometers
- D. 15 meters



ketchup bottle

- A. 150 millimeters
- B. 1 meter
- C. 15 kilometers
- D. 150 centimeters**



worm

- A. 2 millimeters
- B. 2 meters
- C. 2 centimeters**
- D. 2 kilometers

Convert the following metric length measurements.

$$4 \text{ cm.} = \underline{40} \text{ mm.}$$

$$2 \text{ m.} = \underline{200} \text{ cm.}$$

$$4 \text{ km.} = \underline{4,000} \text{ m.}$$

$$30 \text{ mm.} = \underline{3} \text{ cm.}$$

$$600 \text{ cm.} = \underline{6} \text{ m.}$$

$$4 \text{ km.} = \underline{4,000,000} \text{ cm.}$$

$$120 \text{ mm.} = \underline{12} \text{ cm.}$$

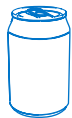
$$9 \text{ m.} = \underline{9,000} \text{ mm.}$$

Examine each item below and determine the appropriate metric measurement.



soup in a spoon

- A. 5 liters
- B. 100 milliliters
- C. 100 liters
- D. 5 milliliters**



soda in a can

- A. 4 liters
- B. 2 milliliters
- C. 350 milliliters**
- D. 35 liters



water in a pond

- A. 500 liters**
- B. 500 milliliters
- C. 50 liters
- D. 50 milliliters



water in a bird bath

- A. 6 liters**
- B. 6 milliliters
- C. 100 milliliters
- D. 100 liters



soup in a bowl

- A. 400 milliliters**
- B. 400 liters
- C. 20 liters
- D. 20 milliliters



lemonade in a glass

- A. 1 liter**
- B. 500 milliliters**
- C. 10 liters
- D. 50 milliliters

Convert the following metric capacity measurements.

$$4,000 \text{ mL} = \underline{\quad 4 \quad} \text{ L.}$$

$$5 \text{ L} = \underline{\quad 5,000 \quad} \text{ mL.}$$

$$3,000 \text{ mL} = \underline{\quad 3 \quad} \text{ L.}$$

$$10 \text{ L} = \underline{\quad 10,000 \quad} \text{ mL.}$$

$$14 \text{ L} = \underline{\quad 14,000 \quad} \text{ mL.}$$

$$5,000 \text{ mL} = \underline{\quad 5 \quad} \text{ L.}$$

$$16,000 \text{ mL} = \underline{\quad 16 \quad} \text{ L.}$$

$$3 \text{ L} = \underline{\quad 3,000 \quad} \text{ mL.}$$

Examine each item below and determine the appropriate metric measurement.



bowling ball

- A. 7 milligrams
- B. 7 grams
- C. 7 kilograms
- D. 100 grams**



large pumpkin

- A. 4 kilograms**
- B. 4 milligrams
- C. 2 grams
- D. 2 milligrams



pen

- A. 1 gram**
- B. 1 milligram
- C. 15 milligrams
- D. 15 grams



paper clip

- A. 1 milligram**
- B. 1 gram
- C. 50 milligrams
- D. 50 grams



rocket

- A. 500,000 grams
- B. 500,000 kilograms**
- C. 50,000 milligrams
- D. 50,000 grams



apple

- A. 20 grams**
- B. 20 milligrams
- C. 2 grams
- D. 2 milligrams

Convert the following metric mass measurements.

$$4 \text{ kg.} = \underline{4,000} \text{ g.}$$

$$3 \text{ g.} = \underline{3,000} \text{ mg.}$$

$$6 \text{ g.} = \underline{6,000} \text{ mg.}$$

$$50 \text{ kg.} = \underline{50,000} \text{ g.}$$

$$2,000 \text{ mg.} = \underline{2} \text{ g.}$$

$$6,000 \text{ g.} = \underline{6,000,000} \text{ mg.}$$

$$8,000 \text{ g.} = \underline{80} \text{ kg.}$$

$$10,000 \text{ kg.} = \underline{10,000,000} \text{ g.}$$

Use the Input/Output Table to complete the conversion.

Input	Output
1 kg.	= 1,000 g.
4 kg.	= <u>4,000</u> g.

Input	Output
2 m.	= 200 cm.
8 m.	= <u>800</u> cm.

Input	Output
3 L.	= 3,000 mL.
6 L.	= <u>6,000</u> mL.

Input	Output
5 g.	= 5,000 mg.
12 g.	= <u>12,000</u> mg.

Input	Output
1,000 mL.	= 1 L.
7,000 mL.	= <u>7</u> L.

Input	Output
2 cm.	= 20 mm.
<u>10</u> cm.	= 100 mm.

Use the Input/Output Table to complete the conversion.

Input	Output
1 km.	= 1,000 m.
<u>10</u> km.	= 10,000 m.

Input	Output
1 L.	= 1,000 mL.
10 L.	= <u>10,000</u> mL.

Input	Output
1 m.	= 1,000 mm.
<u>8</u> m.	= 8,000 mm.

Input	Output
5 g.	= 5,000 mg.
15 g.	= <u>15,000</u> mg.

Input	Output
800 cm.	= 8 m.
1,200 cm.	= <u>12</u> m.

Input	Output
14 km.	= 14,000 m.
6 km.	= <u>6,000</u> m.

Use the Input/Output Table to complete the conversion.

Input	Output
6 g.	= 6,000 mg.
<u>10</u> g.	= 10,000 mg.

Input	Output
6 L.	= 6,000 mL.
<u>10</u> L.	= 10,000 mL.

Input	Output
1 m.	= 1,000 mm.
6 m.	= <u>6,000</u> mm.

Read the word problem below. Identify the times that are given and solve for the missing time. Solve by using both a number line and the standard algorithm.

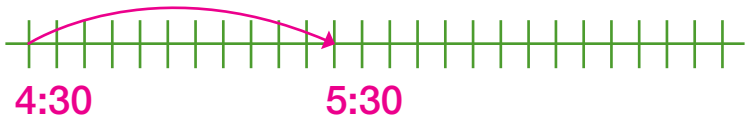
Bella arrived at the store at 4:30 p.m. She shopped for 55 minutes. What time did Bella finish shopping?

Start Time:
4:30 p.m.

End Time:
5:25 p.m.

Elapsed Time:
0:55

Number Line:



Standard Algorithm:

$$\mathbf{4:30 + 0:55 = 5:25}$$

Read the word problem below. Identify the times that are given and solve for the missing time. Solve by using both a number line and the standard algorithm.

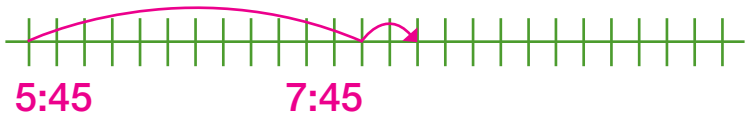
Drake raked leaves in the yard for 2 hours and 20 minutes. If he finished raking at 8:05 p.m., what time did Drake start?

Start Time:
5:45 p.m.

End Time:
8:05 p.m.

Elapsed Time:
2:20

Number Line:



Standard Algorithm:

$$\mathbf{8:05 - 2:20 = 5:45}$$

Read the word problem below. Identify the times that are given and solve for the missing time. Solve by using both a number line and the standard algorithm.

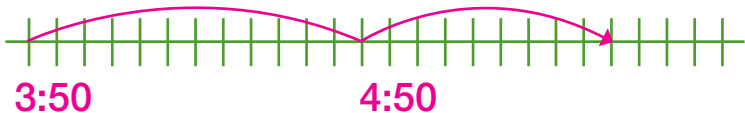
Tina worked on her science project for 1 hour and 45 minutes. If she finished working on her project at 5:35 p.m., what time did she start working on it?

Start Time:
3:50 p.m.

End Time:
5:35 p.m.

Elapsed Time:
1:45

Number Line:



Standard Algorithm:

$$\mathbf{5:35 - 1:45 = 3:50}$$

Read the word problem below. Identify the times that are given and solve for the missing time. Solve by using both a number line and the standard algorithm.

Clint started on a hike at 5:35 a.m. He hiked for 3 hours and 25 minutes. What time did Clint finish his hike?

Start Time:

5:35 a.m.

End Time:

9:00 a.m.

Elapsed Time:

3:25

Number Line:



Standard Algorithm:

$$\mathbf{5:35 + 3:25 = 9:00}$$

Read the word problem below. Identify the times that are given and solve for the missing time. Solve by using both a number line and the standard algorithm.

Jaxon started his basketball game at 9:05 a.m. If his game ended at 10:45 a.m., how long was the game?

Start Time:

9:05 a.m.

End Time:

10:45 a.m.

Elapsed Time:

1:40

Number Line:



Standard Algorithm:

$$\mathbf{10:45 - 9:05 = 1:40}$$

Read the word problem below. Identify the times that are given and solve for the missing time. Solve by using both a number line and the standard algorithm.

Hannah worked on her math homework from 6:45–7:50 p.m. How much time did Hannah spend on her homework?

Start Time:

6:45

End Time:

7:50

Elapsed Time:

1:05

Number Line:



Standard Algorithm:

$$\mathbf{7:50 - 6:45 = 1:05}$$

Read the word problem below. Identify the times that are given and solve for the missing time. Solve by using both a number line and the standard algorithm.

Trey went for a run at 10:15 a.m. He finished at 12:10 p.m. How long was Trey on a run?

Start Time:

10:15

End Time:

12:10

Elapsed Time:

1:55

Number Line:



Standard Algorithm:

$$\mathbf{12:10 - 10:15 = 1:55}$$

Read the word problem below. Identify the times that are given and solve for the missing time. Solve by using both a number line and the standard algorithm.

Cara started to cook dinner at 5:10 p.m. She finished cooking at 6:35 p.m. How much time did Cara spend cooking dinner?

Start Time:
5:10 p.m.

End Time:
6:35 p.m.

Elapsed Time:
1:25

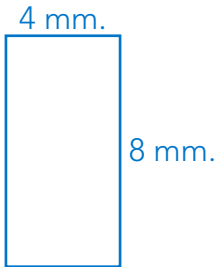
Number Line:



Standard Algorithm:

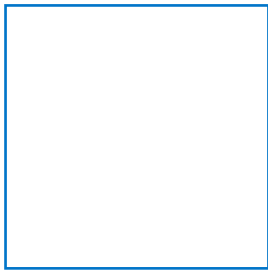
$$\mathbf{6:35 - 5:10 = 1:25}$$

Solve for the perimeter of the figure.



Perimeter: 24 mm.

Solve for the perimeter of the figure.



16 mm.

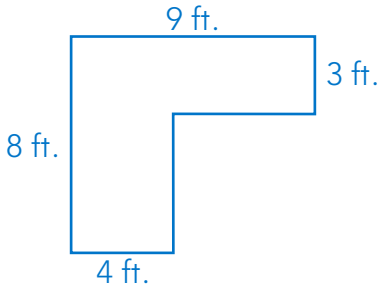
Perimeter: 64 mm.

Solve for the perimeter of the figure.



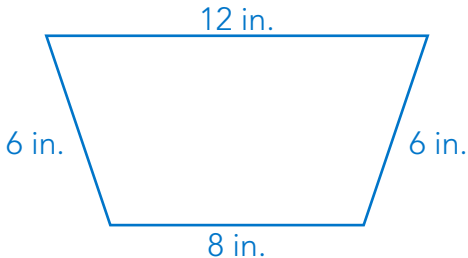
Perimeter: 36 in.

Solve for the perimeter of the figure.



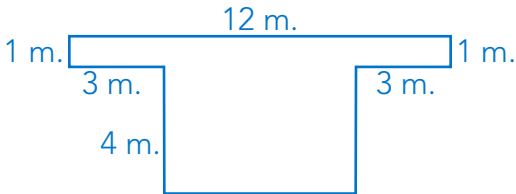
Perimeter: 34 ft.

Solve for the perimeter of the figure.



Perimeter: 32 in.

Solve for the perimeter of the figure.



Perimeter: 34 m.

Erin has a square tile that has a side length of 9 inches. She also has a rectangular tile that has side lengths of 12 inches and 6 inches. Which tile has a larger perimeter? (Hint: Draw a model to solve.)

Sample answer: They
Answer: have the same perimeter.

Luke has a square garden. One side of the garden is 15 feet. What is the perimeter of Luke's garden? (Hint: Draw a model.)

Answer: 60 feet

Solve for the area of the figure below.



Area: 55 sq. ft.

Solve for the area of the figure below.



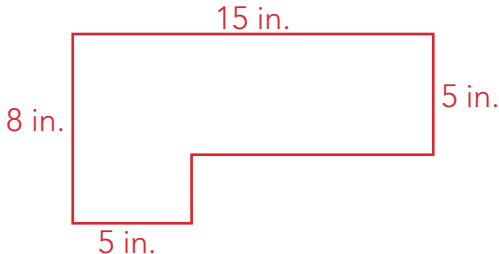
Area: 400 sq. ft.

Solve for the area of the figure below.



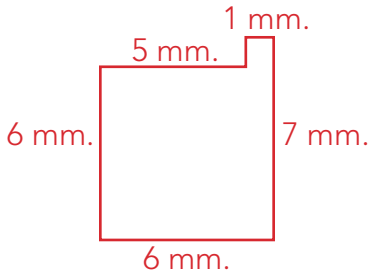
Area: 16 sq. in.

Solve for the area of the figure below.



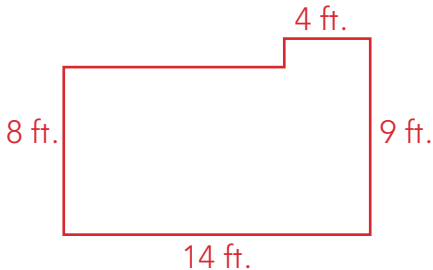
Area: 90 sq. in.

Solve for the area of the figure below.



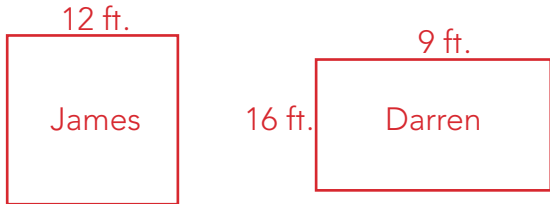
Area: 37 sq. mm.

Solve for the area of the figure below.



Area: 116 sq. ft.

Darren and James compared the sizes of their gardens. Which of their gardens has a greater area?



Sample answer: Their gardens are
Answer: the same size.

Terri has a square rug that measures 10 feet on one side and Daphne has a rectangular rug that measures 6 feet by 11 feet. Whose rug covers a greater area of space? (Hint: Draw a model to solve.)

Answer: Terri

Megan drew a square whose sides measured 17 inches. Henry drew a rectangle whose sides measured 13 inches by 7 inches. Whose figure had a smaller perimeter? How much smaller was the perimeter? (Hint: Draw a model to solve.)

A. Megan; 28 in.

B. Henry; 28 in.

C. Megan; 18 in.

D. Henry; 18 in.

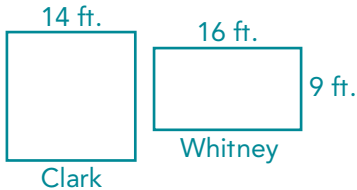
Whitney and Clark compare the sizes of their rugs. Whose rug has a larger area? How much larger is the area of the rug?

A. Whitney; 52 ft.^2

B. Clark; 52 ft.^2

C. Whitney; 36 ft.^2

D. Clark; 36 ft.^2



Which shape has the greater area? Which has the greater perimeter?



Greater Area: **Shape B**

Greater Perimeter: **Shape B**

Grade 4 • Unit 6 • Lesson 17 Measurement Story Cards, Set 1

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Blanca arrived at school at 6:45 a.m. She stayed at school until 4:20 p.m. How long was Blanca at school?

- A. 9 hours and 5 minutes
- B. 9 hours and 20 minutes
- C. 9 hours and 35 minutes
- D. 9 hours and 50 minutes

Jackie started running errands at 8:00 a.m. She spent 50 minutes in the grocery store and then another 45 minutes in the craft store. What time did Jackie finish with her errands?

A. 9:05 a.m.

B. 9:15 a.m.

C. 9:25 a.m.

D. 9:35 a.m.

Kendall had dance practice for 2 hours and 35 minutes. If she finished class at 9:30 p.m., what time did class start?

A. 6:55 p.m.

B. 7:15 p.m.

C. 7:25 p.m.

D. 7:35 p.m.

Xavier has 4 gallons of milk. How many cups are in his 4 gallons of milk?

Answer: 64 cups

Grade 4 • Unit 6 • Lesson 17 Measurement Story Cards, Set 1

© Reagan Tunstall

Harry started watching a movie at 9:55 p.m. The movie was 2 hours and 10 minutes long. What time did the movie end?

12:05 a.m.

Examine the image below and determine the most appropriate measurement.



- A. 10 feet
- B. 10 yards**
- C. 2 feet
- D. 2 yards

Complete the conversion chart below.

input		output	
32 c.	=	2	gal.
80 c.	=	5	gal.
144 c.	=	9	gal.

Vicky has a square tile that has a side length of 12 inches. She also has a rectangular tile that has side lengths of 14 inches and 8 inches. Which tile has a larger area? (Hint: Draw a model to solve.)

The square tile

Becca started reading her book at 6:45 p.m. She read until 9:30 p.m. How long did Becca read her book?

2 hours 45 minutes

Examine the image below and determine the most appropriate measurement.



full pitcher of lemonade

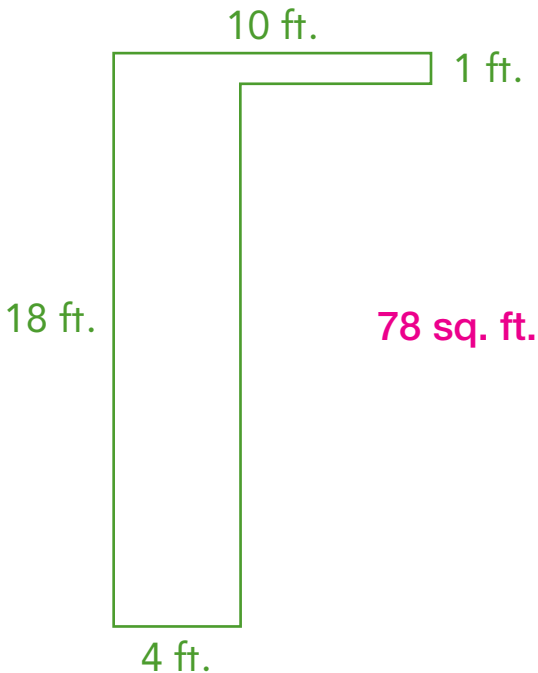
A. 2 liters

B. 100 milliliters

C. 100 liters

D. 2 milliliters

Find the area of the figure below.



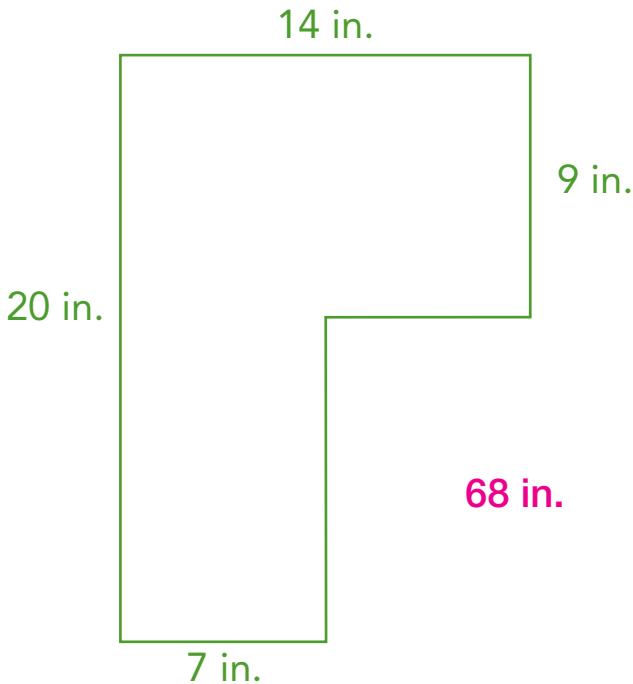
Complete the conversion chart below.

input	output
3 cm.	= 30 mm.
10 cm.	= <u>100</u> mm.
14 cm.	= <u>140</u> mm.

It takes Jacob 2 hours and 45 minutes to get to his grandmother's house. If he needs to be there by 5:30 p.m., what time does Jacob need to leave?

2:45 p.m.

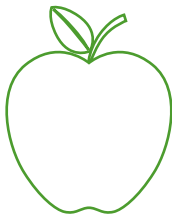
Find the area and perimeter of the shape below.



Complete the conversion chart below.

input		output
3 ft.	=	36 in.
8 ft.	=	<u>95</u> in.
10 ft.	=	<u>120</u> in.

Examine the image below and determine the most appropriate measurement.



apple

A. 5 pounds

B. 5 ounces

C. 1 pound

D. 1 ounce