Estimation Strategies

Compare. Use <, >, or =. Hint: Estimate!

1 320×8 ◯ 180×10

2 16×9 ◯ 24×4

3 70×9 ◯ 90×7

4 93×15 ◯ 24×100

5 108×22 ◯ 250×8

6 99×19 ◯ 20×100

7 61×8 ◯ 52×9

8 53×8 ◯ 101×3

9 104×19 ◯ 206×15

10 272×5 ◯ 201×5

11 199×8 ◯ 147×6

12 189×12 ◯ 206×9

13 98×15 ◯ 198×10

14 89×9 ◯ 11×99

Test Prep

1 gallon = 4 quarts

15 How many quarts are in 10 gallons?

A. $2\frac{1}{2}$ C. 40
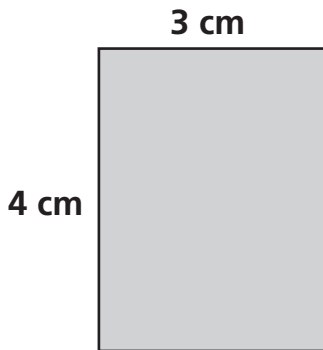
B. 20   D. 160

16 How many gallons are in 20 quarts?

A. 5   C. 40

B. 10   D. 80

Estimating and Checking Length and Perimeter

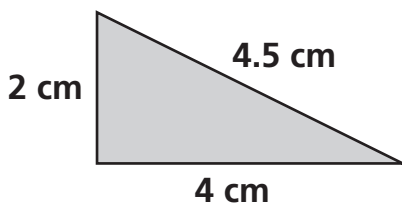**Without using a ruler, say whether each measurement is correct, incorrect or impossible to tell.**

1

3 cm

4 cm

Perimeter = 12 cm

Correct   Incorrect   Impossible to tell

Area = 12 sq cm

Correct   Incorrect   Impossible to tell

2

4.5 cm

2 cm

4 cm

Perimeter = 10.5 cm

Correct   Incorrect   Impossible to tell

Area = 4 sq cm

Correct   Incorrect   Impossible to tell

3

2.5 cm

2 cm
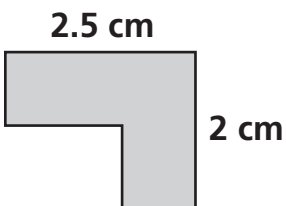
Perimeter = 9 cm

Correct   Incorrect   Impossible to tell

Area = 3.5 sq cm

Correct   Incorrect   Impossible to tell

Test Prep

4 Solve: $1.32 + 0.9 = \blacksquare$

A. 1.329   **C.** 2.22

B. 1.41   **D.** 10.32

5 Solve: $1.32 - 0.9 = \blacksquare$

A. 0.37   **C.** 1.23

B. 0.42   **D.** 2.22

Designing a Store

Use this floor plan of a department store to answer the questions below.

Bathroom

Baby Clothes	Girls' Pants and Skirts	Boys' Pants	Shoes		

Aisle

| Toddler Clothes | Girls' Shirts | Boys' Shirts | Jackets | Toys | |

Snacks
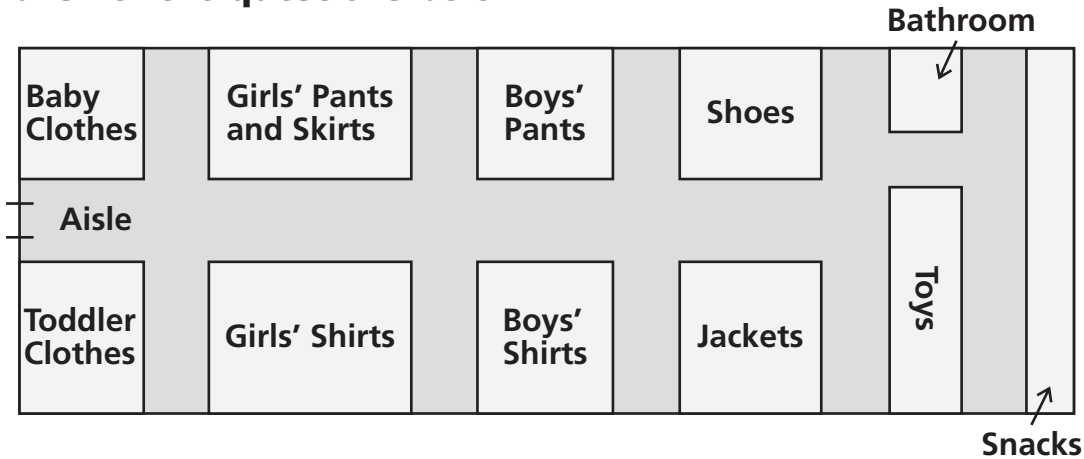
1 Which section has the most floor space? _____

**2** Which section has the largest perimeter? _____

3 If the aisle is 6 feet wide, what is the approximate perimeter of the baby clothes section? _____ feet

4 If the perimeter of the shoe section is 48 feet, what is the approximate area of this section? _____ square feet
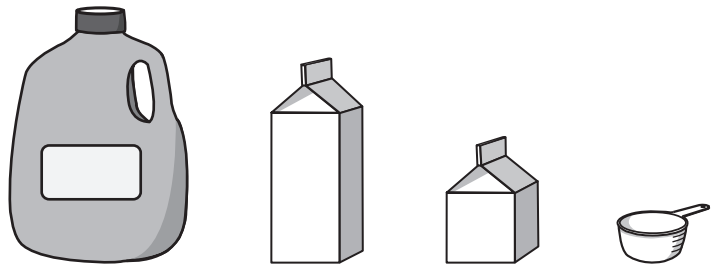
Test Prep

5 The length of the rectangular garden is 10 times the width. If the width is 4 feet, what is the perimeter of the garden? Explain your reasoning.

length

width

_____

_____

_____
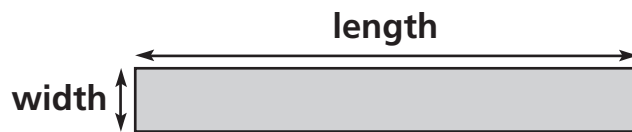
Estimating and Checking Capacity

1 gallon = 4 quarts = 8 pints = 16 cups

1 _____ cups = 1 quart

_____ cups = 3 quarts

2 2 pints = _____ quart

10 pints = _____ quarts

3 _____ cups = $\frac{1}{2}$ gallon

_____ cups = $1\frac{1}{2}$ gallon

4 6 cups = _____ pints

_____ cups = $7\frac{1}{2}$ pints

5 8 cups = _____ pints

_____ pints = 2 quarts

8 cups + 2 quarts = _____ gallon

6 5 pints = _____ cups

3 quarts = _____ cups

5 pints + 3 quarts = _____ cups

Test Prep

7 Which number makes the number sentence true?
Explain your reasoning.

$$4 \times 20 = 8 \times \blacksquare$$

_____

_____

_____

Comparing Units of Capacity

Use estimation to compare these capacities.

1 27 × 8 quarts ◯ 26 × 8 quarts

2 27 × 8 quarts ◯ 26 × 8 gallons

3 29 × 4 cups ◯ 28 × 2 pints

4 37 × 13 pints ◯ 36 × 13 quarts

5 81 × 27 pints ◯ 82 × 14 quarts

6 73 × 91 cups ◯ 74 × 23 quarts

7 17 liters × 23 ◯ 22 × 17 quarts

8 56 × 65 liters ◯ 68 × 57 quarts

9 48 × 62 cups ◯ 61 × 12 quarts

10 19 × 27 quarts ◯ 27 × 80 cups

11 34 × 28 pints ◯ 27 × 34 pints

12 52 × 23 gallons ◯ 23 × 52 gallons

Test Prep

13 Which number makes the number sentence true?

$(17 \times 30) + (17 \times \blacksquare) = 17 \times 38$

A. 38   **C.** 8

B. 30   **D.** 7

14 What is the value of m in the equation $4m = 20$?

A. 5   **C.** 24

B. 16   **D.** 80

Estimating and Checking Weight

**Is the weight reasonable? If not, give
a reasonable estimate of the weight.**
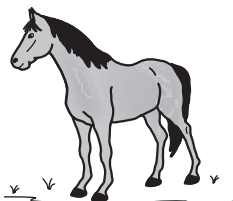
1

5 kilograms

Yes   No

Reasonable Weight

_____

2

35 kilograms

Yes   No

Reasonable Weight

_____

3

50 kilograms

Yes   No

Reasonable Weight

_____

4

35 kilograms

Yes   No

Reasonable Weight

_____

Test Prep

5 Solve.

7.93 + 0.09 = ■

A. 7.102   **C.** 8.02

B. 7.989   **D.** 10.02

6 Which figure is a quadrilateral
with exactly one pair of
parallel sides?

A. parallelogram   **C.** rhombus

B. trapezoid   **D.** hexagon

Comparing Units of Weight

1 Put these weights in order from lightest to heaviest.

| 40 kg | 1 kg | 75 lb | 100 g | 1 lb | 12 oz | 3 tons |

100 g , _____, _____, _____, _____, _____, _____.

Fill in each blank with a reasonable unit.

2 An elephant weighs about 2 _____**tons**_____.

3 An adult weighs about 70 _____.

4 A newborn baby weighs about 7 _____.

5 A birthday card weighs about 1 _____.

6 A box of cereal weighs about 1 _____.

Test Prep

7 Which number makes the number sentence true?

$$36 \times 81 = 36 \times 80 + \blacksquare$$

A. 30　　　　**B.** 36　　　　**C.** 80　　　　**D.** 81

Using Equations to Estimate

Solve.

1 If 7 bags weigh 15 kilograms, is 1 bag more than
2 kilograms?

Yes   No

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2 If 7 bags weigh 15 kilograms, are 10 bags more than
17 kilograms?

Yes   No

---

3 If 6 bags weigh 10 kilograms, are 10 bags more than
20 kilograms?

Yes   No

---

4 If 10 bags weigh 5 kilograms, is 1 bag more than
1 kilogram?

Yes   No

---

5 If 15 bags weigh 13 kilograms, are 21 bags more than
25 kilograms?

Yes   No

Test Prep

6 If $y = 3x - 18$ and $x = 12$, what is y? Explain how
you found the answer.

_____

_____

_____