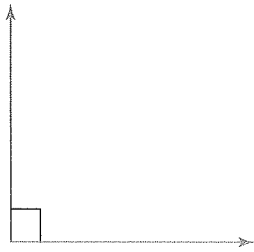
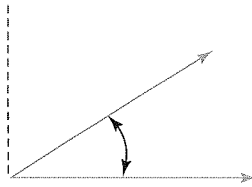


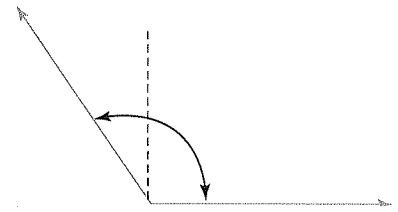
# Lesson 1 Angles



**Right angle**  
90° angle



**Acute angle**  
less than a  
right angle



**Obtuse angle**  
more than a right  
angle

Identify each angle as *right*, *acute*, or *obtuse*.

1. *a*

\_\_\_\_\_

*b*

\_\_\_\_\_

*c*

\_\_\_\_\_

2.

\_\_\_\_\_

*b*

\_\_\_\_\_

*c*

\_\_\_\_\_

3.

\_\_\_\_\_

*b*

\_\_\_\_\_

*c*

\_\_\_\_\_

4.

\_\_\_\_\_

*b*

\_\_\_\_\_

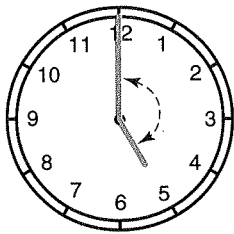
*c*

\_\_\_\_\_

## Lesson 1 Problem Solving

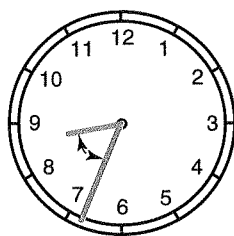
Identify the angle of the clock hands as *acute*, *right*, or *obtuse*.  
Then answer each question.

1.



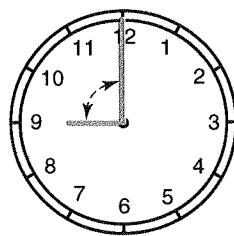
The hands of the clock form a(n) \_\_\_\_\_ angle.

2.



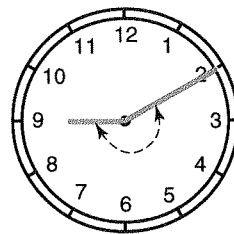
The hands of the clock form a(n) \_\_\_\_\_ angle.

3.



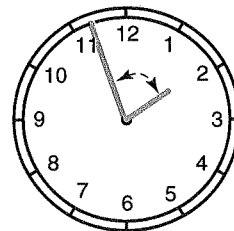
The hands of the clock form a(n) \_\_\_\_\_ angle.

4.



The hands of the clock form a(n) \_\_\_\_\_ angle.

5.

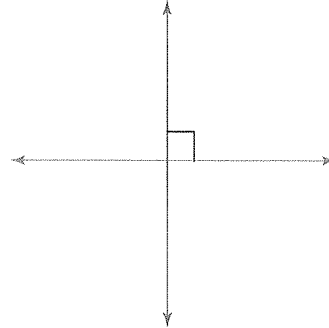


The hands of the clock form a(n) \_\_\_\_\_ angle.

## Lesson 2 Parallel and Perpendicular

**Parallel lines** never meet. They are always the same distance apart.

**Perpendicular lines** intersect, or cross each other, to form right angles.



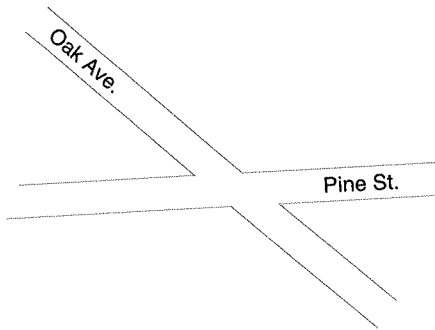
Identify each pair of lines as *parallel*, *perpendicular*, or *neither*.

	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>
<b>1.</b>	 _____	 _____	 _____	 _____
<b>2.</b>	 _____	 _____	 _____	 _____
<b>3.</b>	 _____	 _____	 _____	 _____
<b>4.</b>	 _____	 _____	 _____	 _____

## Lesson 2 Problem Solving

Identify the roads as being *parallel*, *perpendicular*, or *neither*.  
Then answer each question.

1.

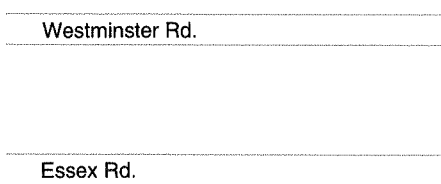


Do the roads cross each other? \_\_\_\_\_

Do the roads form right angles? \_\_\_\_\_

The roads form \_\_\_\_\_ lines.

2.

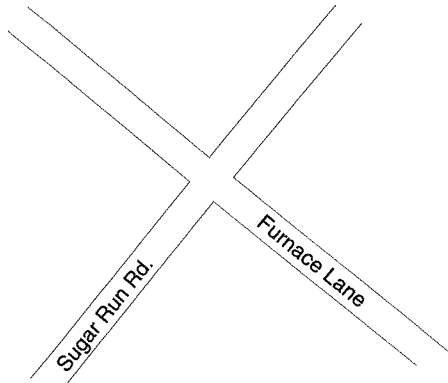


Do the roads form right angles? \_\_\_\_\_

Do the roads cross each other? \_\_\_\_\_

The roads form \_\_\_\_\_ lines.

3.

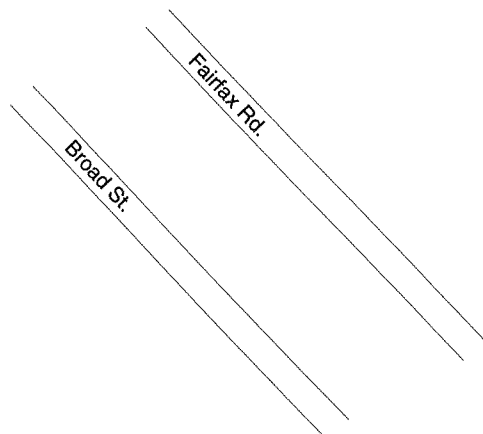


Do the roads cross each other? \_\_\_\_\_

Do the roads form right angles? \_\_\_\_\_

The roads form \_\_\_\_\_ lines.

4.



Do the roads form right angles? \_\_\_\_\_



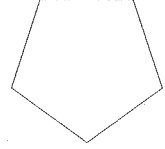
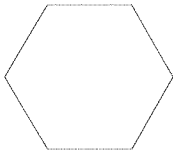
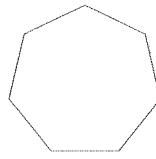
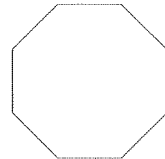
Do the roads cross each other? \_\_\_\_\_

The roads form \_\_\_\_\_ lines.


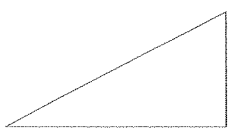
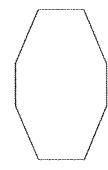
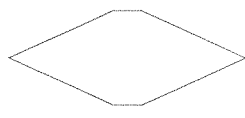
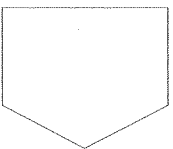
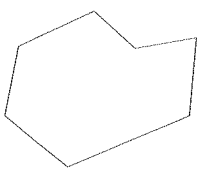
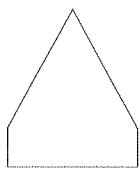
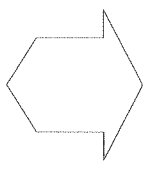

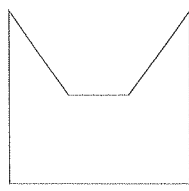

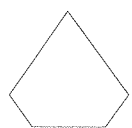
# Lesson 3 Plane Figures

A **plane figure**, or polygon, is a closed figure with three or more straight sides. Vertices are the points where two sides meet.

Plane figures are named for the number of sides and vertices.

<p><b>triangle</b></p>  <p>3 sides 3 vertices</p>	<p><b>quadrilateral</b></p>  <p>4 sides 4 vertices</p>	<p><b>pentagon</b></p>  <p>5 sides 5 vertices</p>
<p><b>hexagon</b></p>  <p>6 sides 6 vertices</p>	<p><b>heptagon</b></p>  <p>7 sides 7 vertices</p>	<p><b>octagon</b></p>  <p>8 sides 8 vertices</p>

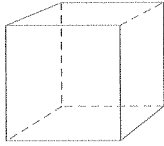
Identify each plane figure as a *triangle*, *quadrilateral*, *pentagon*, *hexagon*, *heptagon*, or *octagon*.

1.	a 	b 	c 	d 
2.				
3.				

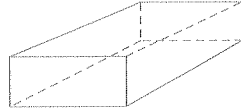
# Lesson 4 Solid Figures

**Solid figures** have three dimensions.

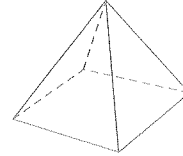
Some solid figures have flat surfaces.



**cube**

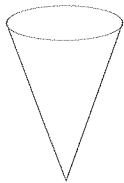


**rectangular prism**

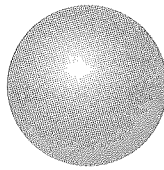


**pyramid**

Some solid figures have curved surfaces.



**cone**

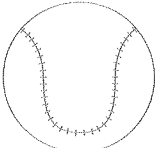
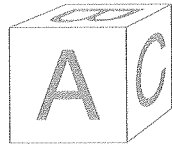

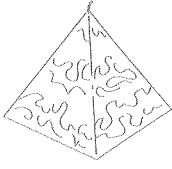
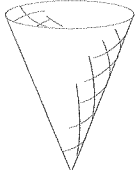
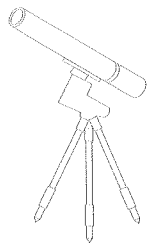
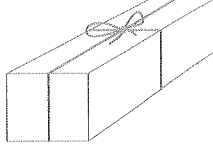
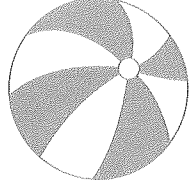
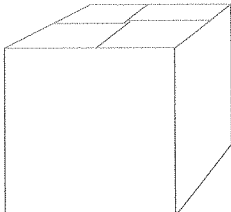
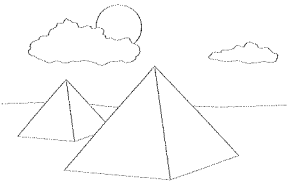
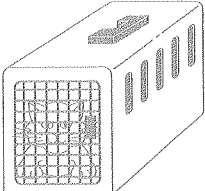
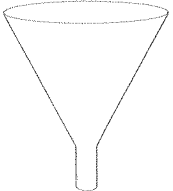


**sphere**



**cylinder**

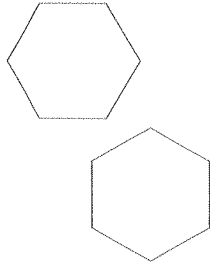
Identify each object as being closest to the shape of a *cube*, *rectangular prism*, *pyramid*, *cone*, *sphere*, or *cylinder*.

	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>
1.				
	_____	_____	_____	_____
2.				
	_____	_____	_____	_____
3.				
	_____	_____	_____	_____

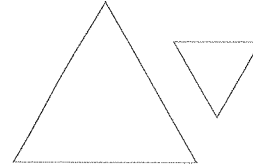
# Lesson 5 Congruence

Two figures that have the same size and shape are **congruent**.

These figures are **congruent**.



These figures are **not congruent**.



Identify each pair of plane figures as *congruent* or *not congruent*.

*a*

1. \_\_\_\_\_

*b*

\_\_\_\_\_

*c*

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

4. \_\_\_\_\_

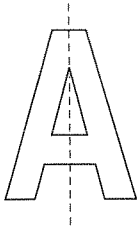
\_\_\_\_\_

\_\_\_\_\_

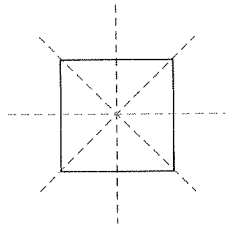
## Lesson 6 Symmetry

A plane figure has **symmetry** if it can be folded in one or more ways to make two congruent figures.

This figure has one line of symmetry.



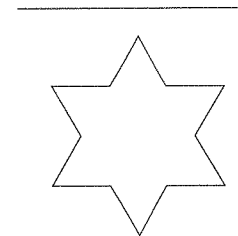
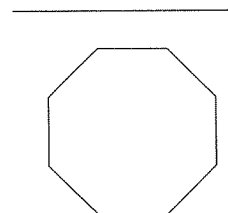
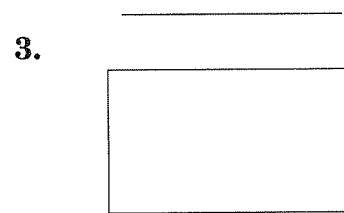
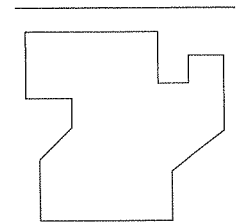
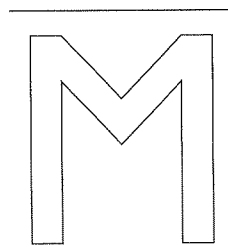
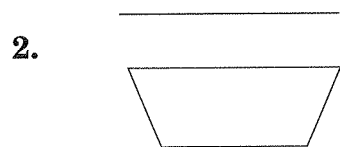
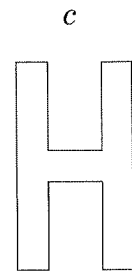
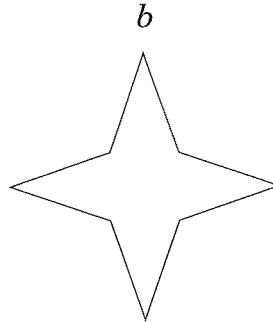
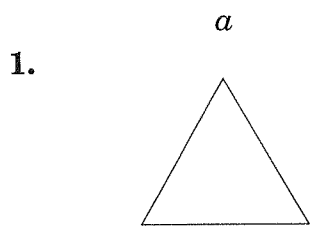
This figure has four lines of symmetry.



This figure has no lines of symmetry.



Draw all the possible lines of symmetry for each figure and write the number of lines. If a figure has no line of symmetry, write *none*.

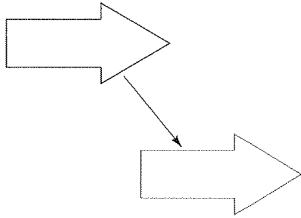




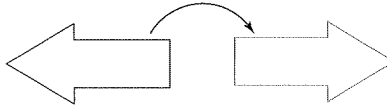
# Lesson 7 Slides, Flips, and Turns

You can describe how figures have been moved by the terms **slide**, **flip**, and **turn**.

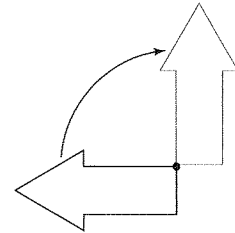
**Slide** a figure to move it up, down, left, right, or diagonally.



**Flip** a figure to create a mirror image.

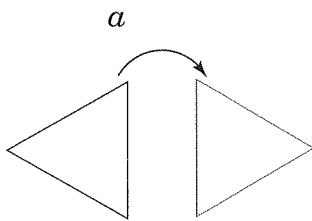


**Turn** a figure to rotate it around a point.



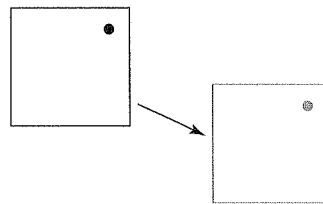
Identify how each figure has been moved by writing *slide*, *flip*, or *turn*.

1.



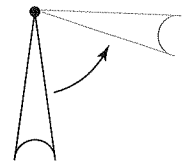
\_\_\_\_\_

*b*



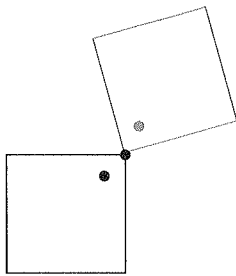
\_\_\_\_\_

*c*

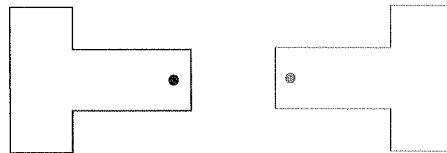


\_\_\_\_\_

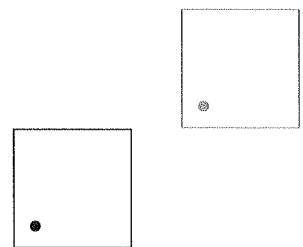
2.



\_\_\_\_\_

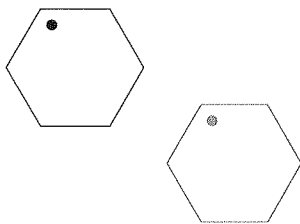


\_\_\_\_\_

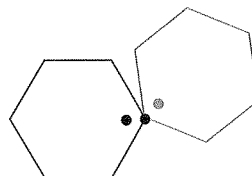


\_\_\_\_\_

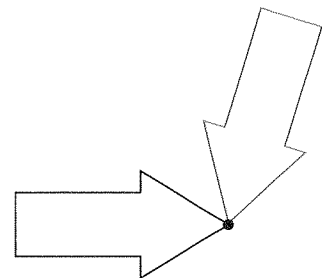
3.



\_\_\_\_\_



\_\_\_\_\_

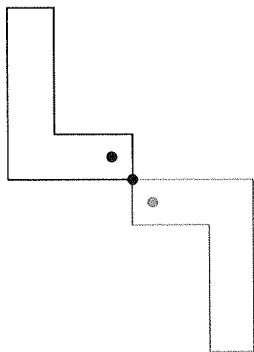


\_\_\_\_\_

## Lesson 7 Problem Solving

What kind of movement is shown by these figures? Answer each question.

1.



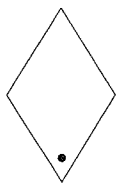
Has the figure moved in one direction? \_\_\_\_\_

Has the figure been rotated? \_\_\_\_\_

Has the figure been turned over? \_\_\_\_\_

The movement is a \_\_\_\_\_.

2.

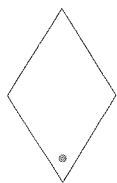


Has the figure moved in one direction? \_\_\_\_\_

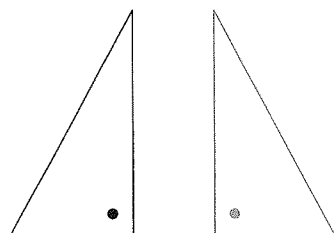
Has the figure been rotated? \_\_\_\_\_

Has the figure been turned over? \_\_\_\_\_

The movement is a \_\_\_\_\_.



3.



Has the figure moved in one direction? \_\_\_\_\_

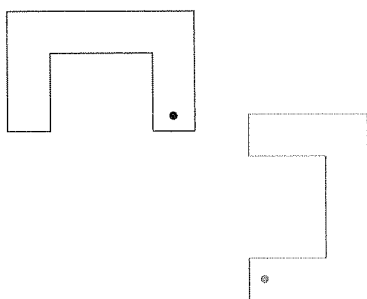
Has the figure been rotated? \_\_\_\_\_

Has the figure been turned over? \_\_\_\_\_

The movement is a \_\_\_\_\_.

What two kinds of movement are shown by these figures?

4.



Has the figure moved in one direction? \_\_\_\_\_

Has the figure been rotated? \_\_\_\_\_

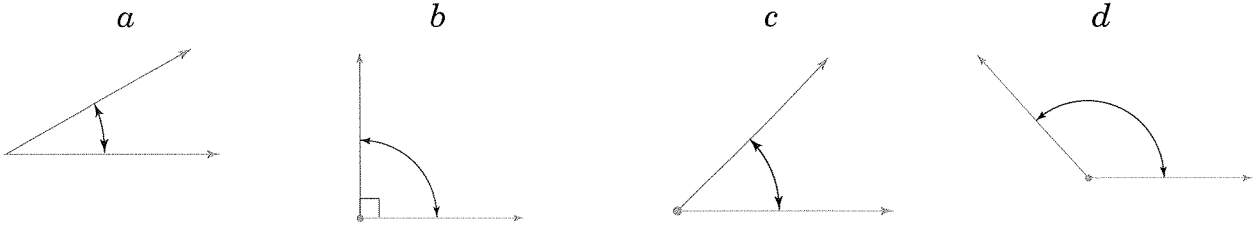
Has the figure been turned over? \_\_\_\_\_

The movements are a \_\_\_\_\_ and a \_\_\_\_\_.

# CHAPTER 13 PRACTICE TEST

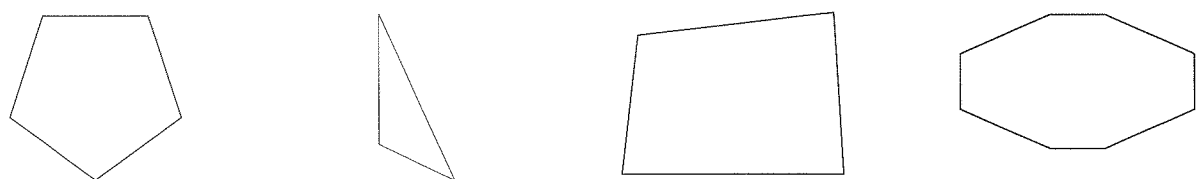
## Geometry

Identify each angle as *right*, *acute*, or *obtuse*.

1. 

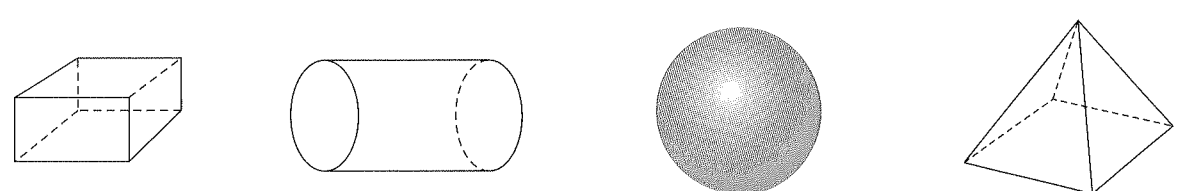
\_\_\_\_\_

Identify each plane figure as a *triangle*, *quadrilateral*, *pentagon*, *hexagon*, *heptagon*, or *octagon*.

2. 

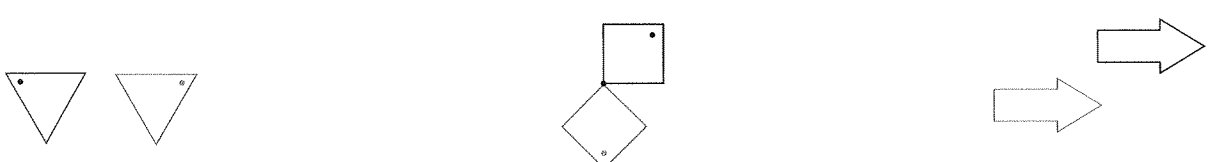
\_\_\_\_\_

Identify each solid figure as a *cube*, *rectangular prism*, *pyramid*, *cone*, *sphere*, or *cylinder*.

3. 

\_\_\_\_\_

Identify how each figure has been moved by writing *slide*, *flip*, or *turn*.

4. 


\_\_\_\_\_

# CHAPTER 14 PRETEST

## Metric Measurement

Find the length of each line segment to the nearest centimetre (cm).  
Then find the length of each line segment to the nearest millimetre (mm).

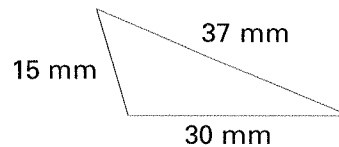
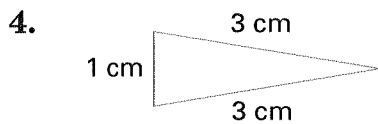
*a**b*

1. \_\_\_\_\_ cm      \_\_\_\_\_ mm      

2. \_\_\_\_\_ cm      \_\_\_\_\_ mm      

3. \_\_\_\_\_ cm      \_\_\_\_\_ mm      

Find the perimeter of each figure.



\_\_\_\_\_ cm

\_\_\_\_\_ mm

Complete the following.

*a**b*

5. 9 cm = \_\_\_\_\_ mm

7 kL = \_\_\_\_\_ L

6. 4 m = \_\_\_\_\_ cm

5 g = \_\_\_\_\_ mg

7. 8 m = \_\_\_\_\_ mL

13 m = \_\_\_\_\_ mm

8. 6 L = \_\_\_\_\_ mL

1 km = \_\_\_\_\_ m

9. 9 kg = \_\_\_\_\_ g

29 L = \_\_\_\_\_ mL

10. 12 m = \_\_\_\_\_ cm

23 kL = \_\_\_\_\_ L

11. 1 g = \_\_\_\_\_ mg

80 cm = \_\_\_\_\_ mm

12. 92 kg = \_\_\_\_\_ g

16 km = \_\_\_\_\_ m