

1) Solve this equation:  $a + a + 2 = 6 + 4$

2) Which is the expression?

$2a + 2 = 10$

$a + 4$  OR  $b - 6 = 3$



~~$2a + 2 = 10 - 2$~~

$3m$  (circled in red)

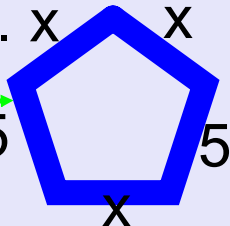
3) The perimeter of a square is  $16\text{cm}$ . Write an equation to find the side length of the square.

$P = s + s + s + s$

4)  $3m + 3 = 9$ ,  $m = ?$

$\frac{16 - 4s}{4} = \frac{4s}{4}$   
 $4 = s$

5) The perimeter of a shape is  $40\text{ cm}$ .



Find the value of  $x$ .

6) 10% of 230

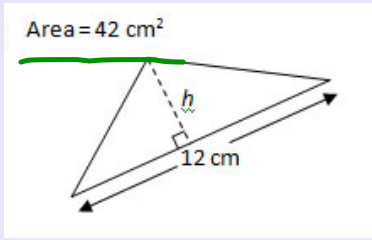
$2 = 3$

$40 = 5 + x + 5 + x + x$

$40 = 10 + 3x$   
 $10 + 3x = 40$   
 $3x + 10 = 40$

7)  $(-5) - (-2) = 3$

8) What is the height of the triangle?



$3x + 10 = 40$

~~$3x + 10 - 10 = 40 - 10$~~

$3x = 30$

$\frac{3x}{3} = \frac{30}{3}$

$x = 10$

$A = \frac{bh}{2}$

$42 = \frac{12h}{2}$

$42 \times 2 = 84$

$84 \div 12 = 7$

Grady spent \$10 every week for the past 5 weeks. Now he has \$ 35 left.

How much money did Grady start with?

Write an equation, then solve the problem.

$$n - 50 = 35$$
$$\rightarrow n - 50 + 50 = 35 + 50 = 85$$

Verify

$$\rightarrow 85 - 50 = 35$$
$$35 = 35$$

### Key Words

- parallel lines
- perpendicular lines
- line segment
- bisect
- bisector
- perpendicular bisector
- angle bisector
- coordinate grid
- Cartesian plane
- x-axis
- y-axis
- origin
- quadrants

# Geometry

# 8.1

## Parallel Lines

**Focus** Use different methods to construct and identify parallel line segments.

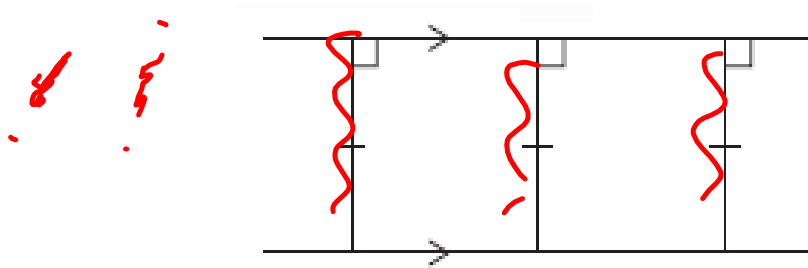
Identify parallel line segments in these photos. How could you check they are parallel?





**Parallel lines** are lines on the same flat surface that never meet.

\* They are always the same distance apart. \*





**line segment:** the part of a line between two points on the line



► Use a ruler and compass as shown below.



**Example**

Use a ruler and compass to draw a line segment parallel to line segment AB that passes through point C.

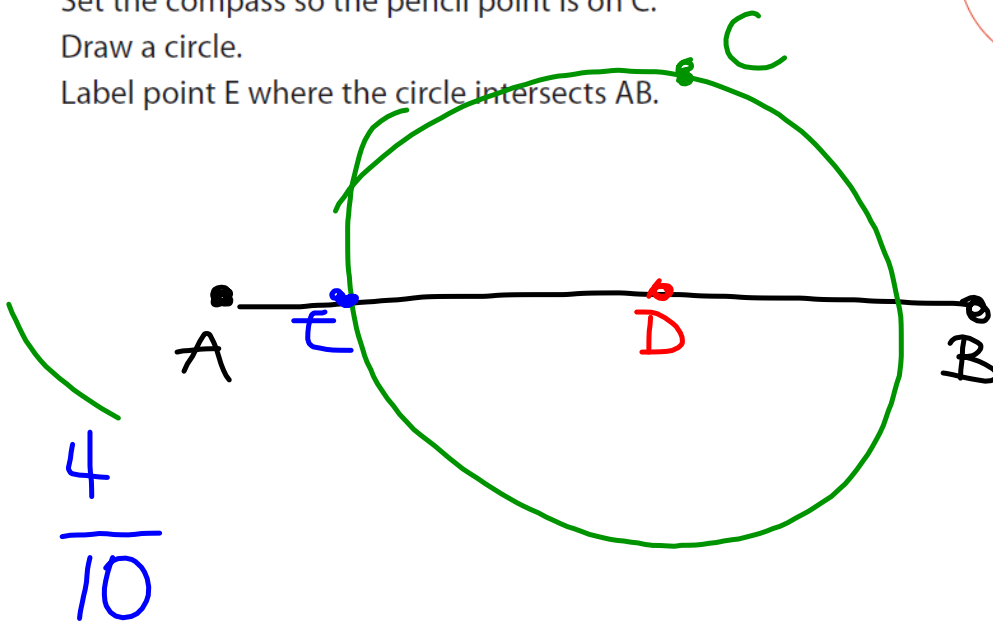
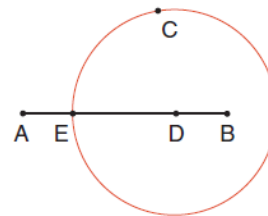
A *line segment* is the part of a line between two points on the line.

·  
C  
**Our Mission**

### A Solution

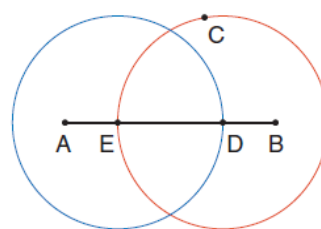
- Mark any point D on AB.
- Place the compass point on D.  
Set the compass so the pencil point is on C.  
Draw a circle.  
Label point E where the circle intersects AB.

two points on the line.

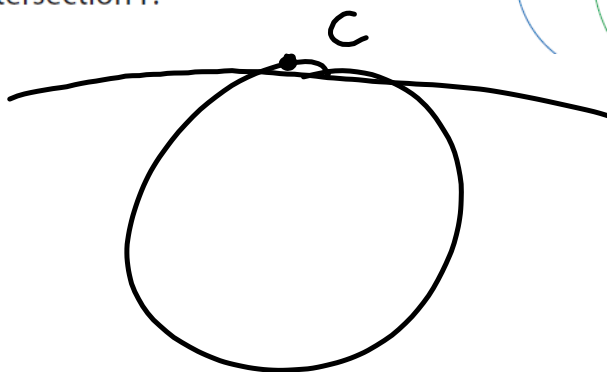
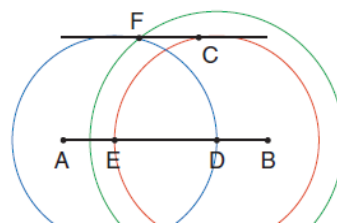




- Do not change the distance between the compass and pencil points.  
Place the compass point on E.  
Draw a circle through D.
- Place the compass point on E.  
Set the compass so the pencil point is on C.

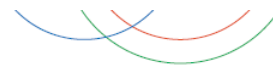


- Place the compass point on D.  
Draw a circle to intersect the circle through D.  
Label the point of intersection F.



- Draw a line through points C and F.  
Line segment CF is parallel to AB.

The 2 line segments are parallel because they are always the same distance apart.



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Complete all of the questions :)

*Dmit 6*

\* There is a worksheet also!

