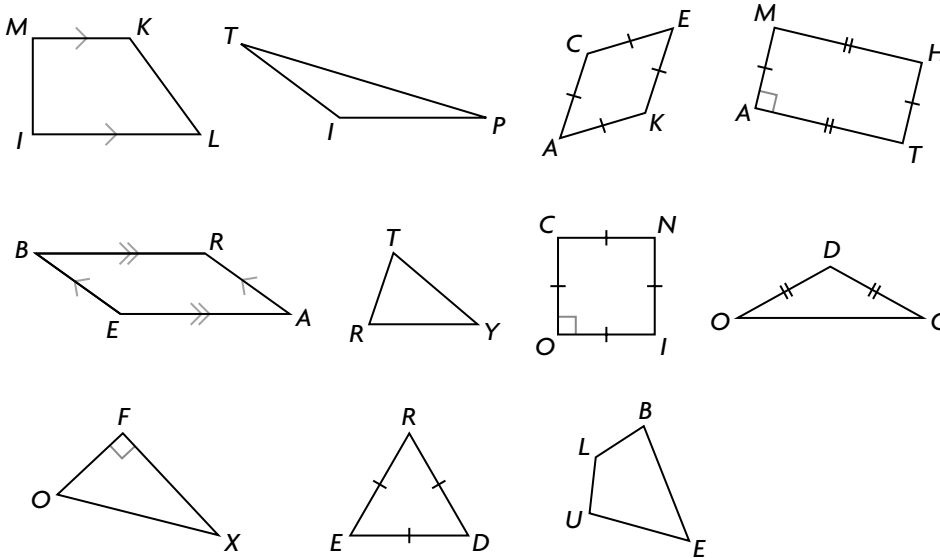


REVIEW OF TERMS AND CONNECTIONS

WORDS You Need to Communicate Effectively

1. Match each term with one shape.

- | | | |
|-------------------------|--------------------|------------------|
| a) scalene triangle | e) acute triangle | i) parallelogram |
| b) isosceles triangle | f) obtuse triangle | j) rhombus |
| c) equilateral triangle | g) quadrilateral | k) rectangle |
| d) right triangle | h) trapezoid | l) square |

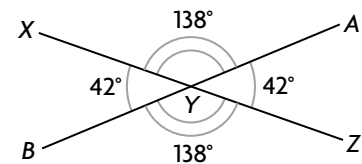


2. Draw a diagram to illustrate each term.

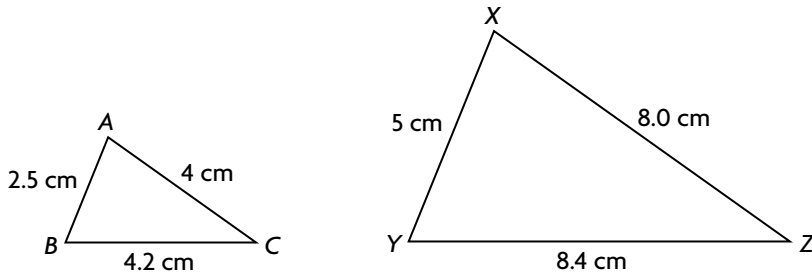
- parallel lines
- perpendicular lines
- supplementary angles

CONNECTIONS You Need for Success

- Two intersecting lines form two pairs of equal angles, called vertically opposite angles.
- Two angles are supplementary if the sum of their measures is 180° .
- Two shapes are similar if
 - the measures of all the corresponding angles are equal and the lengths of all the corresponding sides are related by the same scale factor, or
 - the ratios of the lengths of the sides in one shape equal the ratios of the lengths of the corresponding sides in the other shape.



For example:



$$\frac{AB}{BC} = \frac{2.5}{4.2} = 0.595$$

$$\frac{XY}{YZ} = \frac{5}{8.4} = 0.595$$

$$\frac{AB}{AC} = \frac{2.5}{4} = 0.625$$

$$\frac{XY}{XZ} = \frac{5}{8} = 0.625$$

$$\frac{BC}{AC} = \frac{4.2}{4} = 1.05$$

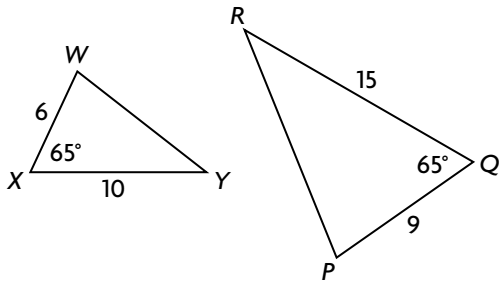
$$\frac{YZ}{XZ} = \frac{8.4}{8} = 1.05$$

D. Two shapes are congruent if the measures of all the corresponding angles are equal and the lengths of all the corresponding sides are equal.

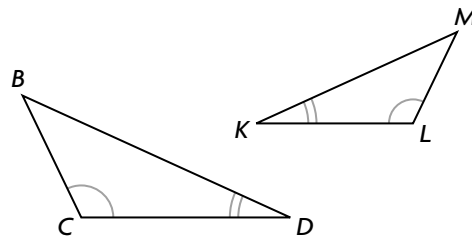
PRACTISING

3. For each of the following, explain how you know that the two triangles are similar.

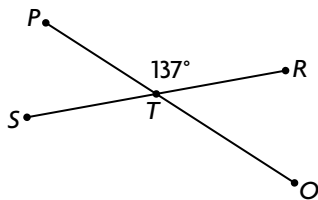
a)



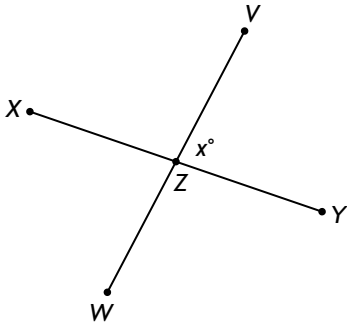
b)



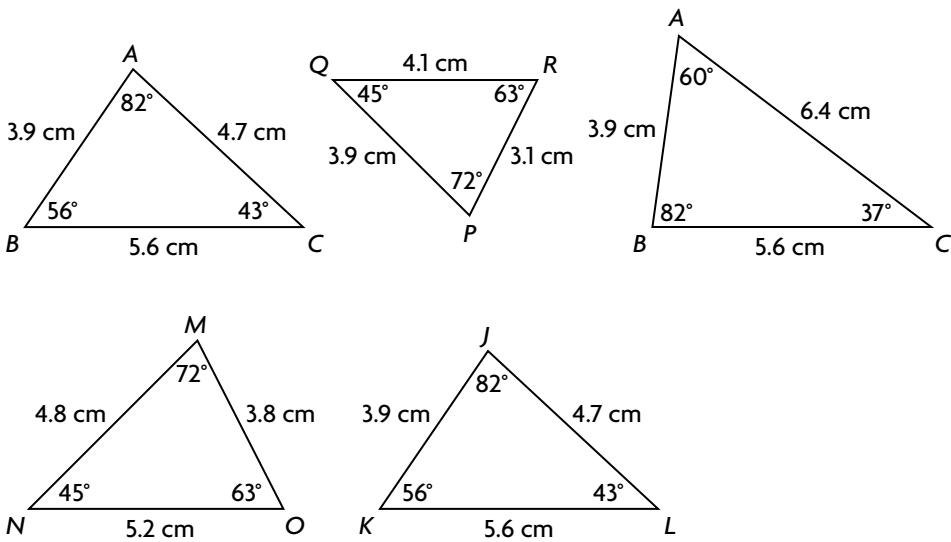
4. Determine the unknown angles.



5. Determine the measures of the unknown angles in terms of x .



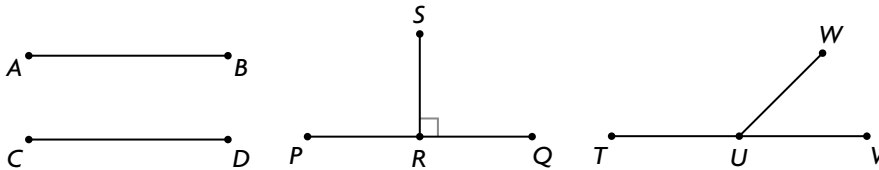
6. Identify the congruent triangles.



REVIEW OF TERMS AND CONNECTIONS ANSWERS

1. a) $\triangle TRY$ e) $\triangle TRY$ i) *BEAR*
 b) $\triangle DOG$ f) $\triangle TIP$ j) e.g., *CAKE*
 c) $\triangle RED$ g) e.g., *BLUE* k) e.g., *MATH*
 d) $\triangle FOX$ h) e.g., *MILK* l) e.g., *COIN*

2. a) parallel lines b) perpendicular lines c) $\angle TUV$ and $\angle WUV$ are supplementary.



3. a) Answers may vary, e.g., $\frac{WX}{PQ} = \frac{XY}{QR} = \frac{2}{3}$

b) Answers may vary, e.g., since two pairs of corresponding angles in the triangles are equal, and since the sum of the measures of the angles in a triangle is 180° , I know that the third pair of corresponding angles must also be equal; so, $\triangle BCD \sim \triangle MLK$.

4. $\angle PTS = 43^\circ$ Supplementary angles
 $\angle STO = 137^\circ$ Vertically opposite angles are equal.
 $\angle RTO = 43^\circ$ Vertically opposite angles are equal.
5. $\angle VZX = 180^\circ - x$ Supplementary angles
 $\angle XZW = x$ Vertically opposite angles are equal.
 $\angle YZW = 180^\circ - x$ Vertically opposite angles are equal.
6. $\triangle ABC \cong \triangle JKL$ All corresponding sides are equal, and all corresponding angles are equal.