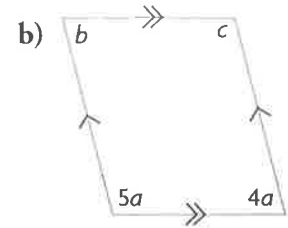
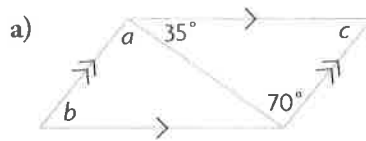
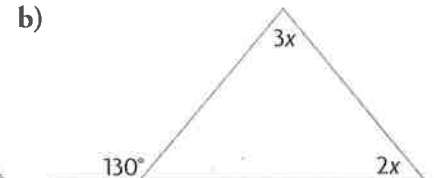
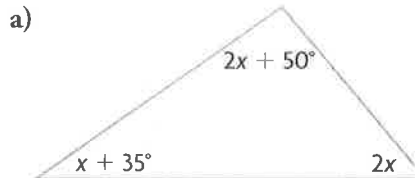


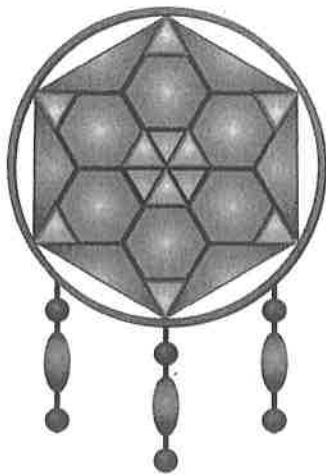
1. Determine the values of a , b , and c .



2. Determine the value of x in the following diagrams.

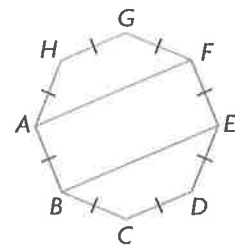


3. a) Construct a pair of parallel lines and a transversal using a protractor and a straight edge.
 b) Label your sketch, and then show by measuring that the alternate interior angles in your sketch are equal.
 c) Identify all the pairs of equal angles in your sketch.
4. Joyce is an artist who uses stained glass to create sun catchers, which are hung in windows. Joyce designed this sun catcher using triangles and regular hexagons. Determine the measure of the interior angles of each different polygon in her design.

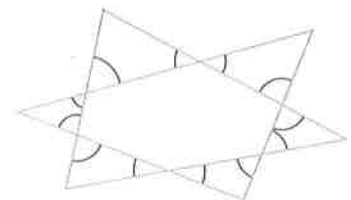


5. $ABCDEFGH$ is a regular octagon.

- a) Draw an exterior angle at vertex C .
 b) Determine the measure of the exterior angle you drew.
 c) Prove: $AF \parallel BE$



6. Determine the sum of the indicated angles.

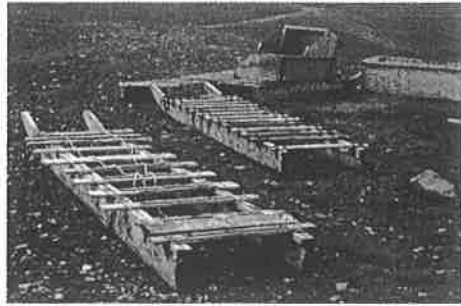


WHAT DO You Think Now? Revisit **What Do You Think?** on page 69. How have your answers and explanations changed?

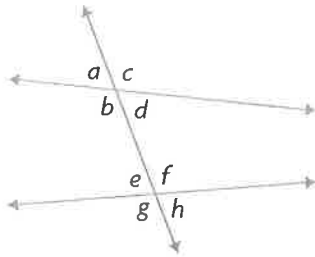
PRACTISING

Lesson 2.1

1. Kamotiqs are sleds that are dragged behind vehicles, such as snowmobiles, over snow and sea ice. Identify a set of parallel lines and a transversal in the photograph of a kamotiq.

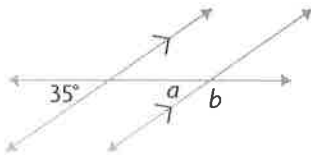


2. a) Name the pairs of corresponding angles.

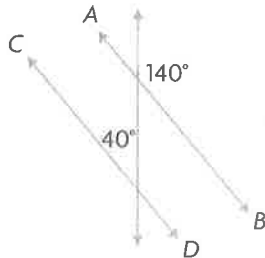


- b) Are any of the pairs you identified in part a) equal? Explain.
 c) How many pairs of supplementary angles can you see in the diagram? Name one pair.
 d) Are there any other pairs of equal angles? If so, name them.

3. Determine the values of a and b .

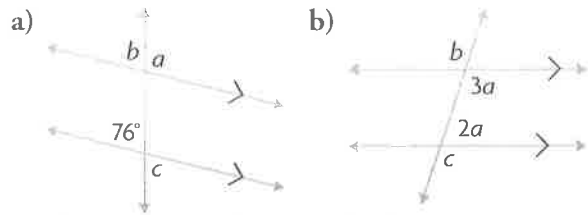


4. Is AB parallel to CD ? Explain how you know.



Lesson 2.2

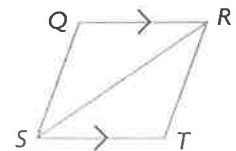
5. Determine the values of a , b , and c .



6. a) Construct a pair of parallel lines using a straight edge and a compass.
 b) Explain two different ways you could verify that your lines are parallel using a protractor.

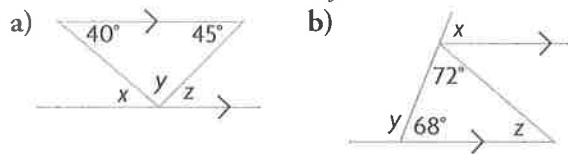
7. Given: $QR \parallel ST$
 $\angle QRS = \angle TRS$

Prove: $ST = TR$

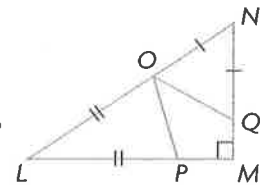


Lesson 2.3

8. Determine the values of x , y , and z .



9. Given: $LM \perp MN$
 $LP = LO$
 $NO = NQ$
 Prove: $\angle POQ = 45^\circ$



Lesson 2.4

10. a) Determine the sum of the measures of the interior angles of a 15-sided regular polygon.
 b) Show that each exterior angle measures 24° .
11. Given: $ABCDE$ is a regular pentagon.
 Prove: $AC \parallel ED$

