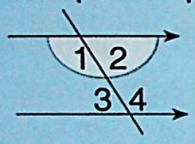
1.9 Finding alternate angles on parallel lines

Activity: Work in groups

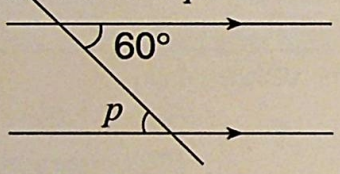
- Draw a pair of parallel lines crossed by the transversal.



- Shade angles 1 and 2.
- Use a pair of scissors to cut off each of the shaded angles.
- Compare $\angle 1$ with $\angle 4$, then $\angle 2$ with $\angle 3$. What do you notice?

Example 1

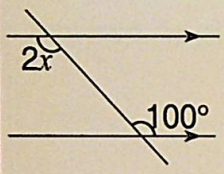
Find the value of p.



$\angle p = 60°$ (Alternate angles)

Example 2

Find the value of x.



$2x = 100°$ (Alternate angles)

$\frac{2x}{2} = \frac{100°}{2}$

$x = 50°$

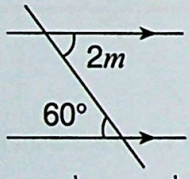
Aid to memory

- Alternate angles on parallel lines are equal.
  They appear like:  OR

Exercise 8.9

Work out the following to find the sizes of the marked angles.

1.



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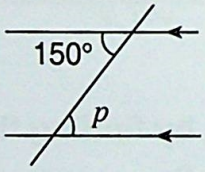

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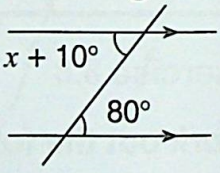

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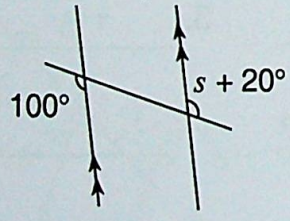

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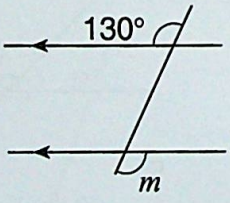

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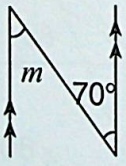

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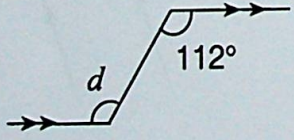
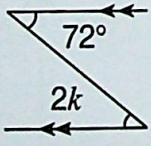


8.



9.