Year 10 Home Learning – Lines, Angles and Shapes

1   Find x in each figure. Give reasons.

a

b

c

d

e

f
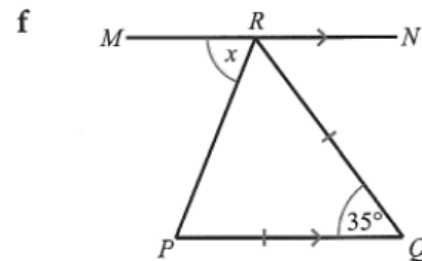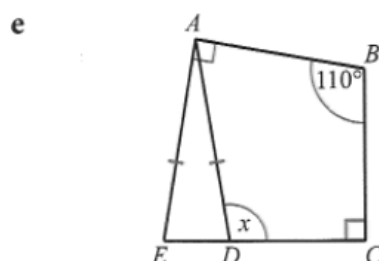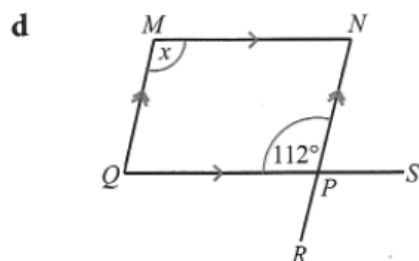
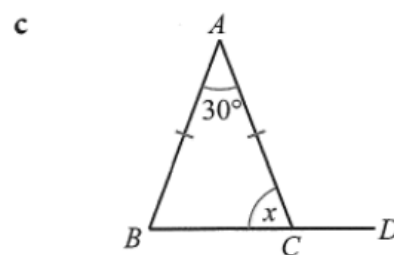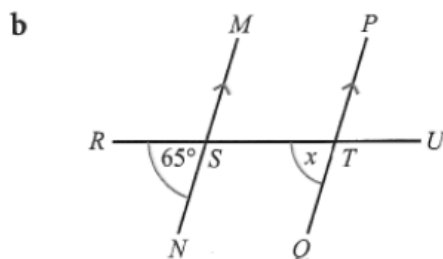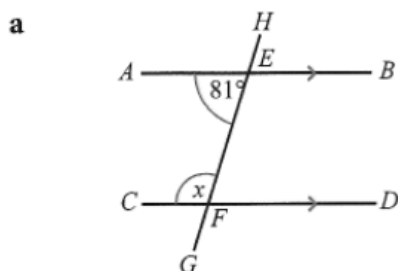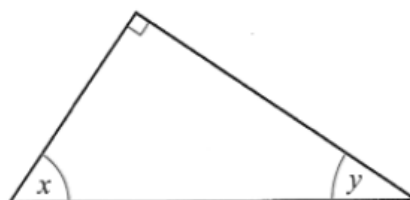2   Study the triangle.

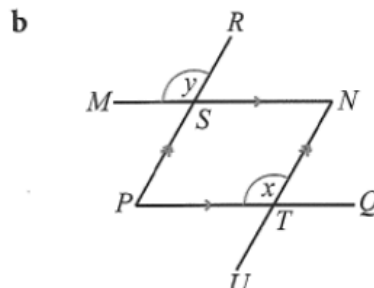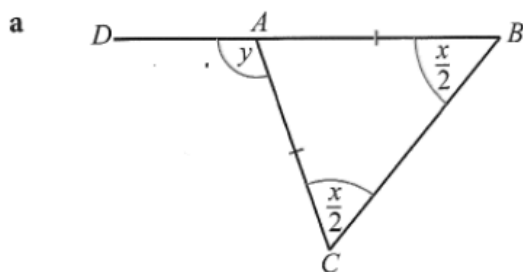

a   Explain why $x + y = 90°$.
b   Find y if $x = 37°$.

3   What is the sum of interior angles of a regular hexagon?

4   a   What is the sum of exterior angles of a convex polygon with 15 sides?
b   What is the size of each exterior angle in this polygon?
c   If the polygon is regular, what is the size of each interior angle?

5   Explain why $x = y$ in the following figures.

a

b

6   a   Measure this line and construct AB the same length in your book using a ruler and compasses.

A _____ B

b   At point A, measure and draw angle BAC, a 75° angle.
c   At point B, measure and draw angle ABD, an angle of 125°.

7   a   Construct triangle PQR with sides $PQ = 4.5\,cm$, $QR = 5\,cm$ and $PR = 7\,cm$.