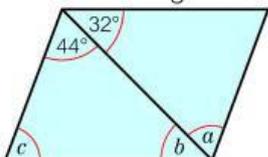# 9 Check up

## Quadrilaterals

1 Name each quadrilateral being described.
   a All my angles are 90º. My diagonals bisect each other at 90º.
   b My diagonals bisect each other at 90º, all my sides are equal, but my angles are not 90º.
   c I have one pair of parallel sides and two sides of equal length

2 One of the diagonals has been drawn in this parallelogram.

Work out the size of angles a, b and c.
Give a reason for each answer.

3 Here is an isosceles trapezium.
   a Work the size of angles a and b.
      Give a reason for each answer
   b Write down the length of c.
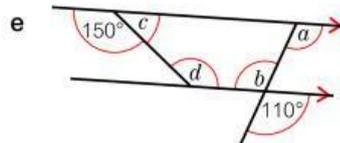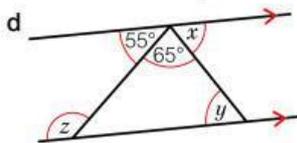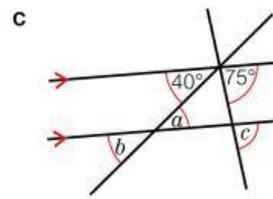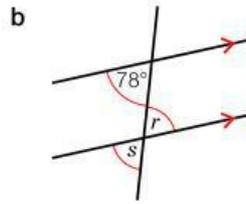   Give a reason for your answer.
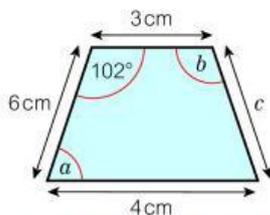
Angles and parallel lines

4 Work out the size of angle x in each diagram. Give reasons.
   a

   b

   c

   d

LIVEWORKSHEETS
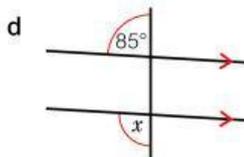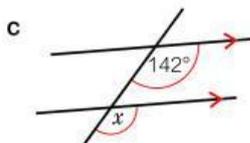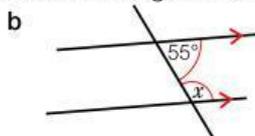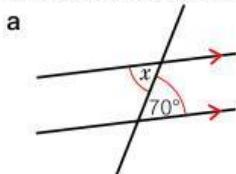
5 Work out the sizes of the angles marked with letters in these diagrams.
Give reasons for your answers.

a

82°
p
q

b

78°
r
s

c

40° 75°
a
b
c

d

55°
65°
x
z
y

e

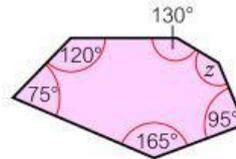

150°
c
a
d
b
110°
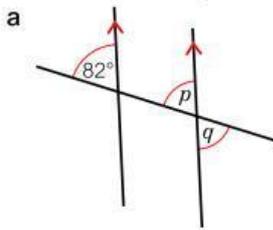
Angles in polygons

6 Work out the sum of the interior angles of this polygon.

7 The diagram shows an irregular hexagon.
   a What is the sum of the interior angles of a hexagon?
   b Work out the size of angle z.

130°
120°
z
75°
95°
165°

8 a Work out the exterior angle of a regular decagon (10-sided polygon). Show your working.
   b Work out the interior angle of a regular decagon.

9 The diagram shows the exterior angle of a regular polygon. Work out how many sides the polygon has.

20°
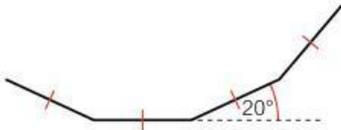
10 How sure are you of your answers? Were you mostly
   ☹ Just guessing   😐 Feeling doubtful   🙂 Confident
   What next? Use your results to decide whether to strengthen or extend your learning.

Challenge

11 The diagram shows two sets of parallel lines. Write down
   a two pairs of alternate angles
   b two pairs of corresponding angles
   c two pairs of angles that sum to 180°
   d two sets of three angles that sum to 180°
   e two sets of four angles that sum to 360°
   f two sets of six angles that sum to 360°.

a b c
f g h
d e
i j
k l
p q
m n o
r s t