GCSE Maths: Quadrilaterals (Foundation): worksheet

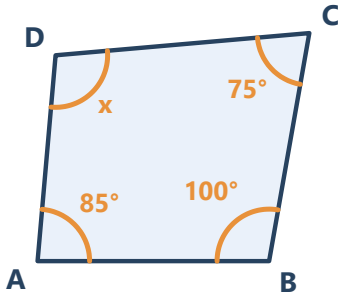
GCSE Maths - Angles, Polygons and Symmetry - Foundation - Lesson 17.5

Name: _____ Date: _____ Score: _____

16 questions. Write your answers in the spaces. Answers and step-by-step help are free at **websink.site/gcse/maths/ch17-angles-polygons-symmetry/foundation/quadrilaterals/**

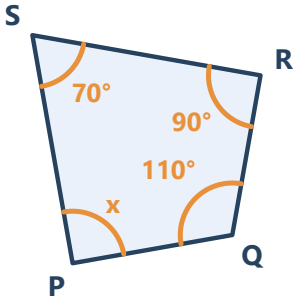
Exercise 17F Quadrilaterals (Non-calculator)

1 The diagram shows a quadrilateral. Work out the size of angle *x*. Give a reason for your answer.



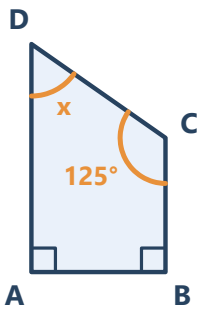
Answer:

2 The diagram shows a quadrilateral. Work out the size of angle *x*. Give a reason for your answer.



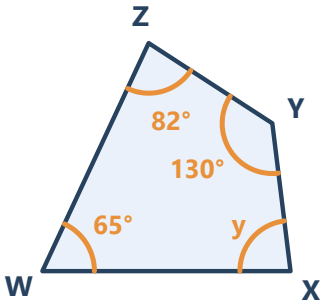
Answer:

3 The diagram shows a quadrilateral. Work out the size of angle *x*. Give a reason for your answer.



Answer:

4 **The diagram shows a quadrilateral. Work out the size of angle *y*.**



Answer:

5 **Write the name of the quadrilateral that matches each description. Give the most specific name.**

(a) Four equal sides and four right angles.

Answer:

(b) Two pairs of equal sides, and opposite sides parallel, and no right angles.

Answer:

(c) Four equal sides, with no right angles.

Answer:

(d) Exactly one pair of parallel sides.

Answer:

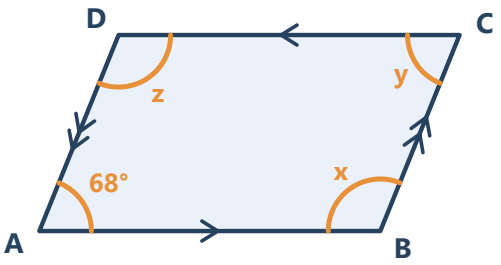
(e) Two pairs of equal sides next to each other, with one line of symmetry.

Answer:

(f) Four right angles and opposite sides equal, but sides not all equal.

Answer:

6 **ABCD is a parallelogram. Angle A = 68°. Work out the size of each angle marked with a letter. Give a reason for each answer.**



(a) Work out angle *x* (angle B).

Answer:

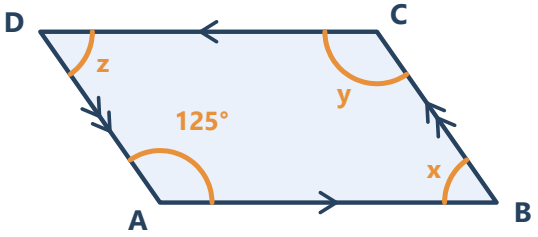
(b) Work out angle *y* (angle C).

Answer:

(c) Work out angle *z* (angle D).

Answer:

7 ABCD is a parallelogram. Angle A = 125°. Work out the size of each angle marked with a letter. Give a reason for each answer.



(a) Work out angle *x* (angle B).

Answer:

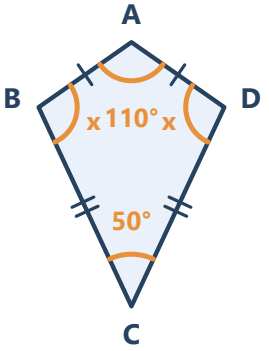
(b) Work out angle *y* (angle C).

Answer:

(c) Work out angle *z* (angle D).

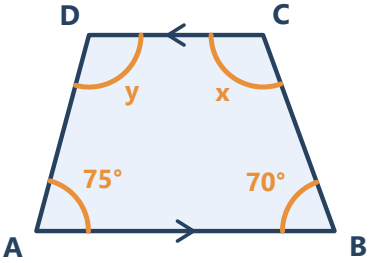
Answer:

8 ABCD is a kite. Angle BAD = 110° and angle BCD = 50°. Work out angle ABC. Give reasons.



Answer:

9 ABCD is a trapezium with AB parallel to DC. Work out the size of (a) angle *x* (b) angle *y*. Give reasons.



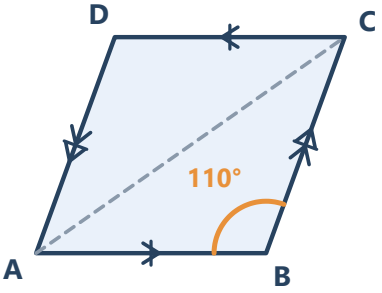
(a) Angle *x* (angle BCD)

Answer:

(b) Angle *y* (angle ADC)

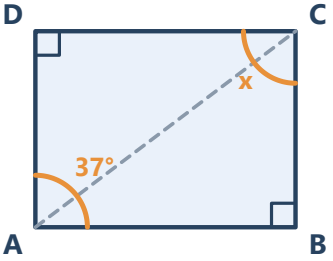
Answer:

10 ABCD is a rhombus. Angle ABC = 110°. The diagonal AC is drawn. Work out the size of angle BAC. Give reasons.



Answer:

11 ABCD is a rectangle and AC is a diagonal. Angle CAB = 37°. Work out the size of angle ACB. Give reasons.



Answer:

12 Write down the number of lines of symmetry of each quadrilateral.

(a) A square: how many lines of symmetry?

Answer:

(b) A rectangle: how many lines of symmetry?

Answer:

(c) A parallelogram: how many lines of symmetry?

Answer:

(d) A rhombus: how many lines of symmetry?

Answer:

(e) A kite: how many lines of symmetry?

Answer:

(f) A isosceles trapezium: how many lines of symmetry?

Answer:

13 Write **true** or **false**. Give a reason for each answer.

(a) Every rectangle is a square.

Answer:

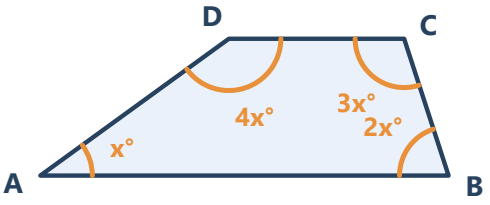
(b) A rhombus is a parallelogram.

Answer:

(c) A trapezium has two pairs of parallel sides.

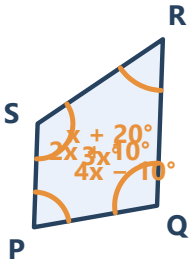
Answer:

14 The diagram shows a quadrilateral. Work out the value of *x*.



Answer:

15 The diagram shows a quadrilateral. Work out the size of the angle marked $4x - 10°$.



Answer:

16 Three angles of a quadrilateral are 90°, 90° and 90°. Write down the fourth angle. What can you say about the quadrilateral? Give a reason.

Answer:

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