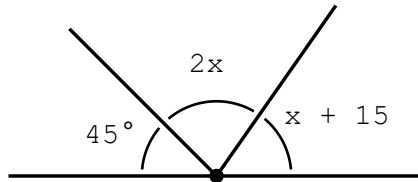


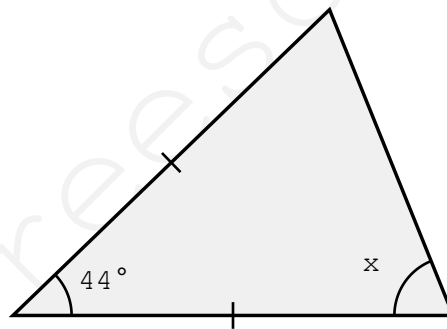
Geometry: 2D Shapes & Angles: Hard Practice Paper 8

Q1. Work out the value of x .



- A. 30 B. 35 C. 40 D. 45 E. 50

Q2. The two dashed sides of this triangle are equal, and the angle between them is 44° . Work out the size of each of the other two angles.

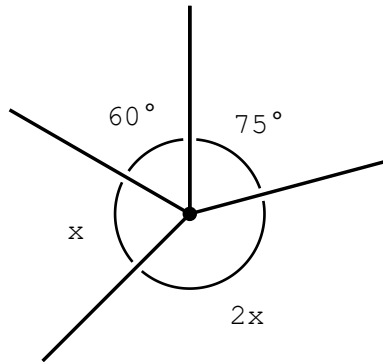


- A. 44° B. 56° C. 68° D. 72° E. 136°

Q3. Each exterior angle of a regular polygon is 12° . How many sides does it have?

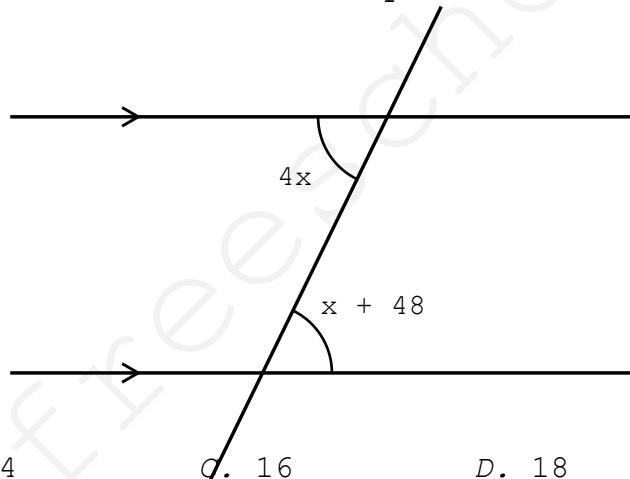
- A. 15 B. 20 C. 24 D. 30 E. 36

Q4. These four angles meet at a point. Work out the value of x .



- A. 55 B. 65 C. 70 D. 75 E. 85

Q5. The two horizontal lines are parallel. Work out the value of x .



- A. 12 B. 14 C. 16 D. 18 E. 20

Q6. A polygon has 20 diagonals altogether. How many sides does it have?

- A. 6 B. 7 C. 8 D. 9 E. 10

Q7. Two squares and three equilateral triangles are placed so that they all meet at one point. Do they fit together exactly, with no gap and no overlap?

- A. Yes, because the angles total exactly 360°
- B. No, there is a gap of 30°
- C. No, there is a gap of 60°
- D. No, they overlap by 30°
- E. No, they overlap by 60°

Q8. The interior angles of a polygon add up to $3,600^\circ$. How many sides does it have?

- A. 18
- B. 20
- C. 22
- D. 24
- E. 26

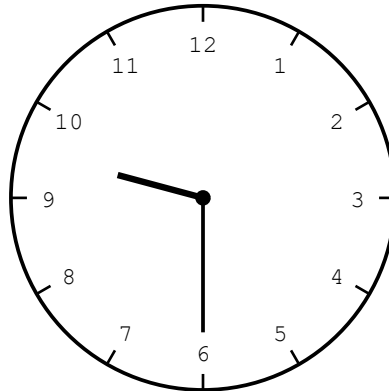
Q9. A regular polygon is split into equal triangles by joining every corner to its centre, and the angle at the centre of each triangle is 24° . How many sides does the polygon have?

- A. 12
- B. 14
- C. 15
- D. 18
- E. 24

Q10. The angles of a quadrilateral are in the ratio 1 : 3 : 5 : 9. What is the difference between the largest and the smallest angle?

- A. 20°
- B. 80°
- C. 120°
- D. 160°
- E. 180°

Q11. What is the size of the angle between the hands of this clock?

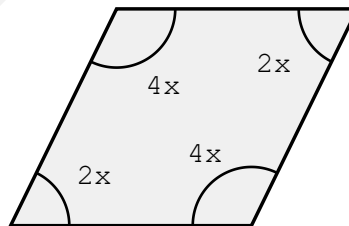


- A. 75° B. 90° C. 105° D. 115° E. 135°

Q12. A square and an equilateral triangle are drawn so that they share one whole side. What is the size of the angle at a shared corner measured outside both shapes?

- A. 150° B. 180° C. 210° D. 240° E. 270°

Q13. Work out the value of x in this rhombus.



- A. 24 B. 30 C. 36 D. 45 E. 60

Q14. Which regular polygon has an interior angle of 162° ?

- A. A 12-sided polygon
- B. A 15-sided polygon
- C. A 18-sided polygon
- D. A 20-sided polygon
- E. A 24-sided polygon

Q15. In triangle ABC the exterior angle at C is 118° , and angle A is 3 times as big as angle B. What is the size of angle A?

- A. 29.5°
- B. 39°
- C. 59°
- D. 78°
- E. 88.5°