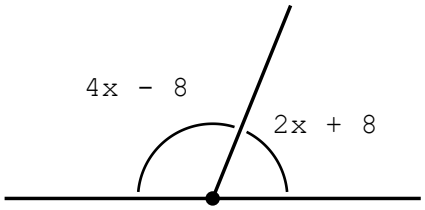
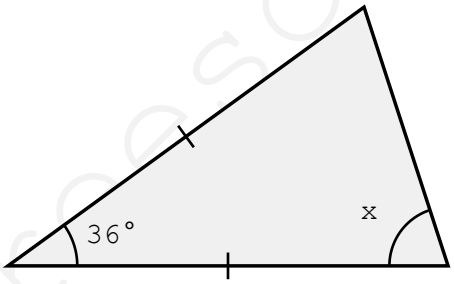
Geometry: 2D Shapes & Angles: Hard Practice Paper 7

Q1. Work out the value of x.



A. 25 *B.* 28 *C.* 30 *D.* 32 *E.* 36

Q2. The two dashed sides of this triangle are equal. Work out the size of angle x.

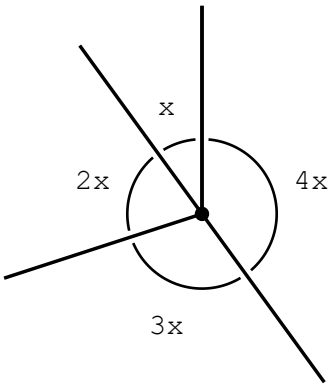


A. 36° *B.* 54° *C.* 68° *D.* 72° *E.* 144°

Q3. The interior angle of a regular polygon is exactly 5 times its exterior angle. How many sides does the polygon have?

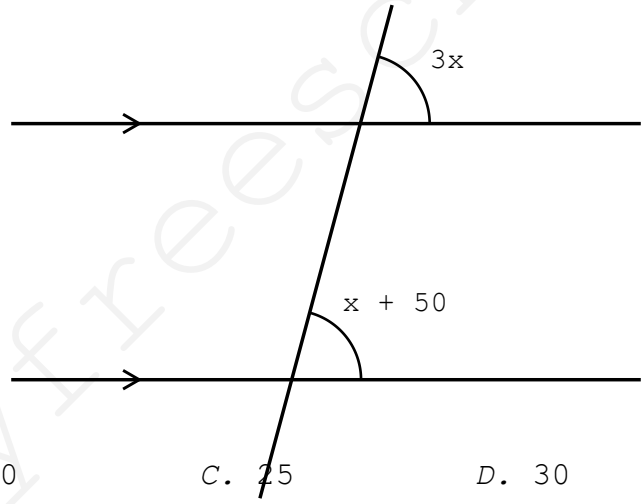
A. 12 *B.* 15 *C.* 18 *D.* 20 *E.* 24

Q4. These four angles meet at a point. Work out the size of the largest one.



A. 36° *B.* 72° *C.* 108° *D.* 144° *E.* 180°

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



A. 15 *B.* 20 *C.* 25 *D.* 30 *E.* 35

Q6. A regular hexagon and a regular pentagon are drawn so that they share one whole side. What is the size of the angle between them at a shared corner?

A. 120° *B.* 132° *C.* 138° *D.* 150° *E.* 228°

Q7. Which of these could be the size of each interior angle of a regular polygon?

A. 100° *B.* 130° *C.* 145° *D.* 150° *E.* 155°

Q8. The interior angles of a polygon add up to 1,980°. How many sides does it have?

A. 11 *B.* 12 *C.* 13 *D.* 14 *E.* 15

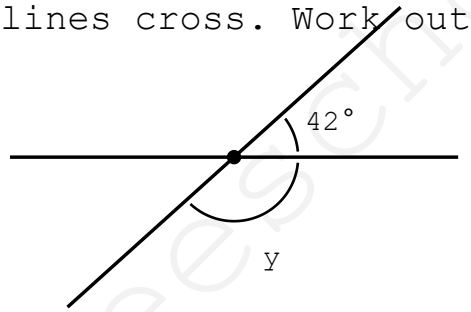
Q9. How many diagonals can be drawn inside an octagon?

A. 8 *B.* 16 *C.* 20 *D.* 24 *E.* 40

Q10. The angles of a triangle are in the ratio 2 : 5 : 8. What is the size of the smallest angle?

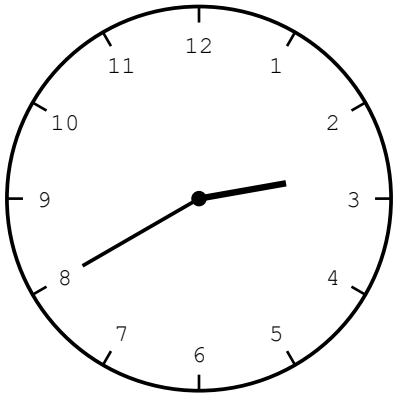
A. 12° *B.* 18° *C.* 24° *D.* 36° *E.* 60°

Q11. Two straight lines cross. Work out the size of angle y.



A. 42° *B.* 48° *C.* 96° *D.* 128° *E.* 138°

Q12. What is the size of the angle between the hands of this clock?

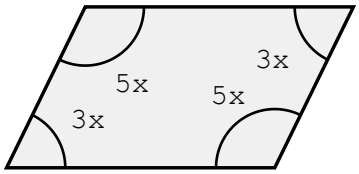


A. 80° *B.* 140° *C.* 160° *D.* 170° *E.* 180°

Q13. A regular polygon has rotational symmetry of order 15. How many lines of symmetry does it have?

A. 1 *B.* 5 *C.* 13 *D.* 15 *E.* 30

Q14. Work out the value of x in this parallelogram.



A. 18 *B.* 20 *C.* 22.5 *D.* 24 *E.* 30

Q15. Two angles of a triangle are equal, and the third is 42° smaller than each of them. What is the size of the largest angle?

A. 46° *B.* 58° *C.* 62° *D.* 74° *E.* 88°