IEM KOLKATA

Geometry

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Q1) Find the measure of an angle if five times its complement is 10° less than twice its supplement.

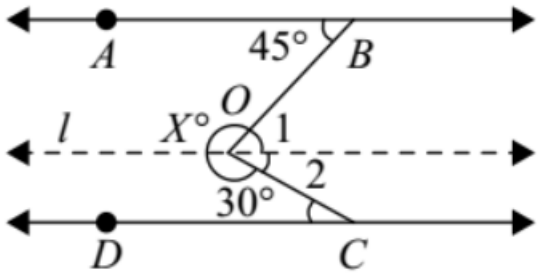
Q2) If angles P and Q are complementary to one another, and angle P is two times of angle Q. Calculate the measures of angles P and Q.

Q3) If the largest angle in a triangle is 70°, what is least possible value of the smallest angle of the triangle?

Q4) Two angles are supplementary and the ratio of the angels is 1:4. what is the value of smaller angle?
(a) 36 degrees (b) 45 degrees (c) 35 degrees (d) 72 degrees

Q5) The complement of 30°20′ is:
(a) 69°40′ (b) 59°40′ (c) 35°80′ (d) 159°40′

Q6) In the given, AB || CD. Then X is equal to:



(a) 93° (b) 103° (c) 89° (d) 285°

Q7)

(i) If a line divides two sides of a triangle proportionally, then it is:

(A) a median (B) an altitude (C) a perpendicular bisector (D) parallel to the third side

(ii) You're drawing a triangle where two of its angles are each 60°. What type of triangle have you created?

(A) Isosceles (B) Right-angled (C) Equilateral (D) Scalene

(iii) Ramanujan is building a ramp. The sides of the ramp measure 6 cm and 8 cm. Find out the length of the diagonal support beam (the hypotenuse) to complete the design?

(A) 10 cm (B) 12 cm (C) 14 cm (D) 9 cm

(iv) The ratio of the areas of two similar triangles is:

(A) Equal to the ratio of their sides (B) Equal to the square of the ratio of their sides (C) Equal to the cube of the ratio of their sides (D) None of these

(v) In a circle, a chord is a line segment:

(A) Joining two points on the circle (B) Passing through the center of the circle (C) Parallel to the radius (D) None of these

(vi) A triangle has 7 cm, 24 cm, and 25 cm sides. What type of triangle is it?

(a) Scalene (b) Right-angled (c) Isosceles (d) Equilateral