Geometry questions are a major part of geometry asked in competitive exams. These questions carry a weightage of 2-5 questions (4-10 marks) in SSC exams. To get a good rank in competitive exams, you should have a conceptual clarity of questions of Geometry.

Here are some tips for solving Geometry questions: Grasp Geometry fundamentals. Learn geometry rules for triangles, circles, quadrilaterals and polygons. Visualize problems with accurate diagrams. Utilize theorems and congruence principles.

So, we have attached 10 questions of Geometry for you to practice with. You should aim to solve these questions in less than half a minute for each.

Practice Questions on Geometry

You can also download the Geometry questions and answers pdf. Just click on the **Download PDF** button. So let's start with the very first question.

Q:1 In the given figure, O is the center of the circle. If ∠POQ = 70°, then what is the value of ∠QSR?

1. 55°

2. 60°

3. 65°

4. 70°

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) A good question to start with....

Q:2 In a circle with centre O, PQ is a diameter and RS a chord such that PQRS is a trapezium. If ∠RPQ = 25°, then find the value of ∠RPS.

1. 45°

2. 40°

3. 54°

4. 60°

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) You won't get easy questions in exam...

Q:3 In the given figure AB is tangent with point O on it, ∠DCO = 72° and ∠AOC = 48° then, find the measure of ∠DOB + ∠CEO.

1. 45°

2. 150°

3. 120°

4. 75°

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) Do you remember the relation.....

Q:4 In the given figure CD || AB, ∠CBA = 35°. Find the value of ∠CDB - ∠DBC.

1. 150°

2. 130°

3. 105°

4. 165°

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) This was a good question.....

Q:5 A tangent drawn from an external point 'P' meets a circle at point 'Q'. If 'O' is the centre of the circle with a radius of 8 cm, and PQ = x cm and PO = (x + 2) cm, then find the value of 'x'.

1. 12

2. 18

3. 15

4. 21

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) We're halfway through. Have you got all your questions correct so far?

Q:6 What is the value of circumradius of the triangle ABC? (AB = 4 cm, BC = 6 cm and AC = 6 cm)

1. $3\sqrt{2}/8$ cm

2. $9\sqrt{2}/4$ cm

3. $3\sqrt{2}/4$ cm

4. $2\sqrt{3}/4$ cm

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) You should have a good practice to solve such.....

Q:7 ABC is a right-angled triangle (right-angled at B) such that AB = 4 cm and BC = 3 cm. A perpendicular BD is drawn from B to the side AC. What is the value of (3AD - 4DC)?

1. 1.2

2. 2

3. 2.4

4. 2.5

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) Be prepared for such questions in exam!

Q:8 Two circles of equal radii of 6 cm intersect each other such that each circle passes through the centre of the other circle. Find the length of the chord that is common to both the circles.

1. $6\sqrt{3}$ cm

2. $2\sqrt{5}$ cm

3. $6\sqrt{2}$ cm

4. $4\sqrt{3}$ cm

(**Difficulty:** 2, **Estimated Time:** 15 Seconds) This was not a hard question!

Q:9 Chords AB and CD of a circle, when produced, meet at a point P outside the circle, If AB = 8 cm, BP = 4 cm and CD = 2 cm then find the value of DP.

1. 8 m

2. 5 m

3. 6 m

4. 2 m

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) Should we increase the level....

Q:10 Find the value of AP in the given figure, if BP and BC are 4 cm and 7 cm, respectively.

1. 8.67 cm

2. 6.25 cm

3. 7.55 cm

4. 8.25 cm

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) Did you guess them all correctly?

Answer Key

Let's check out your score in this test.

1. (1)	**2.** (2)	**3.** (3)	**4.** (3)	**5.** (3)
6. (2)	**7.** (3)	**8.** (1)	**9.** (3)	**10.** (4)

Comment below your score, considering each question has 1 mark only. If you scored 8 to 10, congratulations! You are one step closer to selection. If you have scored 5 to 8 marks, then you are doing well, keep it up. If you have scored less than 5 marks then you need to work a little harder on this subject. But don't worry, we are here to help you master the subject.

Let's check the answers and solutions and try to find out what went wrong.

Answers and Solutions

Q:1 The correct answer is **Option 1** i.e. **55°.**

Given:

∠POQ = 70°

Concept Used:

Angles in the same segment of a circle are equal

The sum of all angles of a triangle is 180°

Explanation:

In the given figure, O is the center of the circle,

So, OP = OQ ⇒ ∠OPQ = ∠OQP

and, OS = OR ⇒ ∠ORS = ∠OSR

Now in triangle POQ,

∠P + ∠Q + ∠O = 180°

⇒ ∠P + ∠P + 70° = 180°

⇒ 2∠P = 110°

⇒ ∠P = 55°

Now, ∠RPQ = ∠QSR [Angle in the same segment]

⇒ ∠QSR = 55°

Hence the value of ∠QSR is 55°

Q:2 The correct answer is **option 2** i.e. **40°.**

In ΔRPQ,

⇒ ∠PRQ = 90° (Angle subtended by diameter on the circle)

⇒ ∠RPQ + ∠PRQ + ∠RQP = 180°

⇒ 25° + 90° + ∠RQP = 180°

⇒ ∠RQP = 65°

Also,

⇒ ∠RQP + ∠PSR = 180° (opposite angles of a cyclic quadrilateral)

⇒ ∠PSR = 180° – 65° = 115°

⇒ ∠SRP = 25° (alternate angles)

Therefore, ∠RPS = 180° – (115° + 25°) = 40°

Q:3 The correct answer is **option 3** i.e. **120°.**

Given

⇒ ∠DCO = 72° and, ∠AOC = 48°

⇒ ∠DCO = ∠DOB = 72° [alternate segment]

⇒ ∠AOC = 48°

AB is a straight line

⇒ ∠AOC + ∠COD + ∠DOB = 180°

⇒ 48° + ∠COD + 72° = 180°

⇒ ∠COD = 60°

Now, In triangle COD

⇒ ∠DCO + ∠COD + ∠ODC = 180°

⇒ 72° + 60° + ∠ODC = 180°

⇒ ∠ODC = 48°

⇒ ∠ODC = ∠CEO = 48°

Value of ∠DOB + ∠CEO = 72° + 48° = 120°

Q:4 The correct answer is **option 3** i.e. **105°.**

⇒ ∠ACB = 90° [angle on semicircle]

In triangle ABC

⇒ ∠ABC + ∠BCA + ∠CAB = 180°

⇒ 35° + 90° + ∠CAB = 180°

⇒ ∠CAB = 55°

ABCD is a cyclic quadrilateral

⇒ ∠CAB + ∠CDB = 180°

⇒ 55° + ∠CDB = 180°

⇒ ∠CDB = 125°

∠DCB = ∠CBA [AB || CD]

In triangle BCD

⇒ ∠BCD + ∠CDB + ∠DBC = 180°

⇒ 35° + 125° + ∠DBC = 180°

⇒ ∠DBC = 20°

Value of ∠CDB - ∠DBC

⇒ 125° - 20° = 105°

Q:5 The correct answer is **option 3** i.e. **15**

In the given figure, ∠OQP = 90° (since, the radius is perpendicular to the tangent at the point of contact)

So, in ∠OPQ, $PO^2 = OQ^2 + PQ^2$

Or, $(x + 2)^2 = 8^2 + x^2$

Or, $x^2 + 4x + 4 = 64 + x^2$

So, 4x + 4 = 64

So, x = (64 − 4) ÷ 4 = 15

Q:6 The Correct answer is **Option 2** i.e. **9√2/4 cm.**

Circumradius = abc/(4 × Area of triangle ABC)

Semi perimeter of ABC,

s = (4 + 6 + 6)/2 = 8 cm

Area of ABC = √{s (s − a) (s − b) (s − c)}

⇒ √{8 × (8 − 4) × (8 − 6) × (8 − 6)}

⇒ $8\sqrt{2}$ cm^2

Circumradius = (4 × 6 × 6)/(4 × 8√2)

⇒ 9/2√2 = 9√2/2 cm

Q:7 The correct answer is **Option 3** i.e. **2.4.**

In triangles ABC and ADB

∠A is common

∠B = ∠D = 90° [Given]

∴ ABC ~ ADB [∵ AA similarity]

AB/AD = BC/BD

AD = BD × AB/BC = 4 BD/3

In triangles ABC and BDC

∠C is common

∠B = ∠D = 90° [Given]

∴ ABC ~ BDC [∵ AA similarity]

AB/BD = BC/DC

DC = BC/AB × BD = 3 BD/4

⇒ (3AD - 4DC) = BD

To find BD:

AC = √ (AB^2 + BC^2) = 5 cm [∵ Pythagoras theorem] 5 cm

Area of ABC = ½ × AB × BC = ½ × AC × BD

⇒ 12 = 5 × BD

∴ BD = 2.4 cm

⇒ 3AD - 4DC = 2.4 cm

Q:8 The correct answer is **option 1** i.e. **6√3 cm**

In the given figure, let 'A' and 'B' represent the centres of the two circles and let XY represent the common chord.

Since the two circles have equal radii and pass through the centre of each other, so, XY bisects AB at 'C'.

We have AB = radii = 6 cm

$\Rightarrow$ AC = (6/2) = 3 cm

$\Rightarrow$ AX = radii = 6 cm

We have, $\angle ACX = 90^o$ {Since a line drawn from the centre of the circle is the perpendicular bisector of the chord}

$\Rightarrow$ CX = CY = (XY/2)

$\Rightarrow AX^2 = AC^2 + CX^2$

$\Rightarrow CX^2 = 6^2 - 3^2 = 27$

$\Rightarrow CX = 3\sqrt{3}$ cm {Since length cannot be negative}

So, $XY = 2 \times 3\sqrt{3} = 6\sqrt{3}$ cm

Q:9 The correct answer is **option 3** i.e. **6 m**

Let DP = x cm

So, PB × PA = PD × PC

$\Rightarrow 4 \times 12 = x(x + 2)$

$\Rightarrow x^2 + 2x - 48 = 0$

$\Rightarrow x^2 + 8x - 6x - 48 = 0$

$\Rightarrow x(x + 8) - 6(x + 8) = 0$

$\Rightarrow (x + 8)(x - 6) = 0$

So, x = 6 {Since length of DP cannot be negative}

Q:10 The correct answer is **option 4** i.e. **8.25 cm**

We know that $BC^2 = BA \times BP$

So, $7^2 = BA \times 4$

Or, $BA = 12.25$ cm

So, $AP = 12.25 - 4 = 8.25$ cm

So, this is it for today. We will meet again with another new topic. Till then, you can practice the questions again by downloading the PDF of Circles.