

YEAR 11 MATHS, TEST 3

1. Expand and simplify $(x - 5)(x + 4)$.

A. $x^2 + 9x - 20$

B. $x^2 - x - 9$

C. $x^2 - x - 1$

D. $x^2 - x - 20$

2. If $\frac{2}{a-1} = \frac{4}{y}$, and $y \neq 0$ where $a \neq 1$, what is y in terms of a ?

A. $y = 2a - 2$

B. $y = 2a - 4$

C. $y = 2a - 12$

D. $y = 2a + 1$

3. If $y = x^3 + 2x + 5$ and $z = x^2 + 7x + 1$, what is $2y + z$ in terms of x ?

A. $3x^3 + 11x + 11$

B. $2x^3 + x^2 + 9x + 6$

C. $2x^3 + x^2 + 11x + 11$

D. $2x^3 + 2x^2 + 18x + 12$

4. If radius is 21 cm and angle at centre of circle is 140° then length of arc is

A. 42.23 cm

B. 73.24 cm

C. 51.31 cm

D. 62.42 cm

5. The slant height of a right circular cone is 10 m and its height is 8 m. Find the area its curved surface.

A. 30m^2

B. 188.6m^2

C. 60m^2

D. 80m^2

6. What is the total surface area of a right circular cone of height 14 cm and base radius 7 cm?

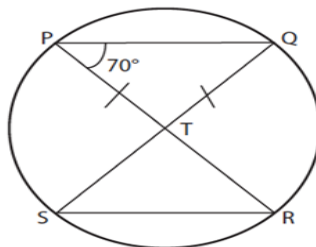
A. 344.35m^2

B. 462m^2

C. 498.35m^2

D. None of these

7. In the diagram below, PQRS is a circle. If $\angle PTQ = \angle QPT$ and $\angle QPT = 70^\circ$, calculate $\angle PRS$?



Fig

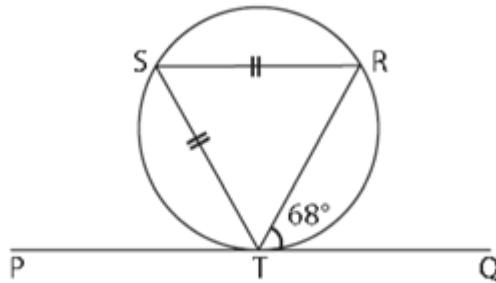
A. 40°

B. 70°

C. 35°

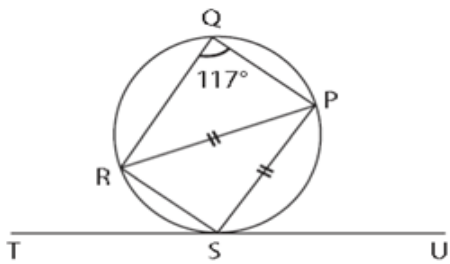
D. 140°

8. In Figure below, PTS is a tangent to circle RST at T. $|SR| = |ST|$ and $\angle RTQ = 68^\circ$. Find $\angle PTS$.

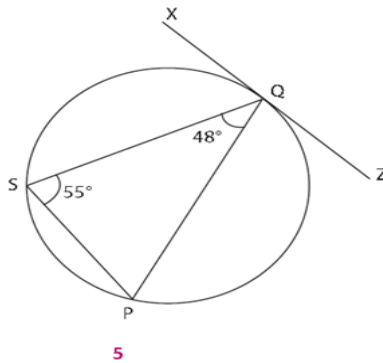


Fig

- A. 56° B. 74° C. 36° D. 68°
9. In Figure below, TSU is a tangent to circle PQRS at S. If $|PR| = |PS|$ and $\angle PQR = 117^\circ$, calculate $\angle RST$.



- A. 54° B. 63° C. 36° D. 68°
10. In Figure below, XQZ is a tangent to circle QPS. Calculate $\angle SQX$.



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- A. 77° B. 63° C. 103° D. 68°