

YEAR 11 MATHS TEST 4

1. A chord is 10cm from the centre of a circle. If the radius of the circle is 26cm, calculate the length of the chord.

- A. 36cm B. 24cm C. 12cm D. 48cm

2. Solve: $m = \frac{8}{3m+2}$

A. $m = 2$ or $\frac{2}{3}$

B. $m = 8$ or $\frac{3}{4}$

C. $m = -2$ or $\frac{4}{3}$

D. $m = -1$ or $\frac{4}{3}$

3. For what values of x is the following expression undefined? $\frac{a}{x} - \frac{b}{x^2 + 6x - 7}$

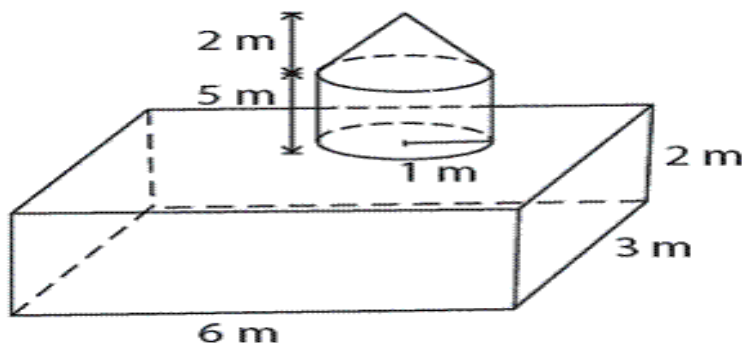
A. $x = 7, 0$ or 6

B. $x = -7, 0$ or 1

C. $x = -7, 2$ or 6

D. $x = 7, 2$ or 3

4. Determine the volume of the composite shape below to the nearest whole number.



A. 86cm^3

B. 53cm^3

C. 54cm^3

D. 48cm^3

5. Simplify: $\frac{p^2 - 5p + 6}{2 - 3p + p^2}$

A. $\frac{p-3}{p-1}$

B. $p - 3$

C. $p + 4$

D. $\frac{p-3}{(p-2)(p-1)}$

6. Simplify: $\frac{(2m - u)^2 - (m - 2u)^2}{5m^2 - 5n^2}$

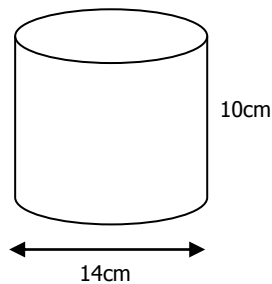
A. $\frac{m-u}{n-u}$

B. $\frac{(m-u)}{5(n-u)}$

C. $\frac{3(m-u)}{(m+n)(m-n)}$

D. $\frac{3}{5}$

7. A bucket is 12cm in diameter at the top, 8cm in diameter at the bottom and 4cm deep. Calculate its volume.
A. 318.4cm^3 B. 101.5cm^3 C. 425.3cm^3 D. 250.7cm^3
8. A frustum of a pyramid is 16cm square at the bottom, 6cm square at the top and 12cm high. Determine the volume of the frustum.
A. 1152cm^3 B. 1552cm^3 C. 980cm^3 D. 1245cm^3
9. P varies directly as Q. P = 100 when Q = 60. Determine the value of P when Q = 180.
A. P = 140 B. P = 300 C. P = 45 D. P = 220
10. The cylinder below is open at one end. Determine its total surface area.



- A. 594cm^2 B. 624cm^2 C. 306cm^2 D. 412cm^2