Year 09
Weekly Tutorial - 05

mathsalpha.com

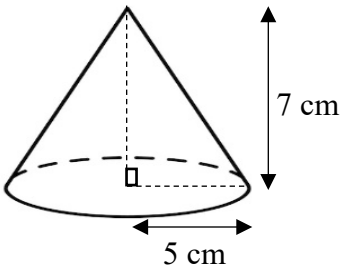
1. Solve by factorization. $12x^2 + x - 6 = 0$

2. Rationalize the denominator.

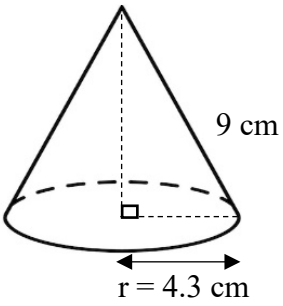
a) $\frac{\sqrt{5}-3}{(\sqrt{5}+1)(\sqrt{5}+2)}$

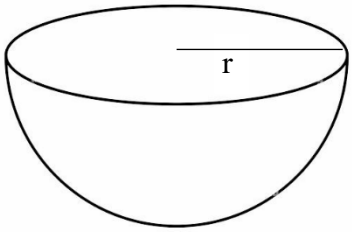
b) $\frac{\sqrt{12}+3}{\sqrt{27}-3}$

3. Find the surface area of the cone.



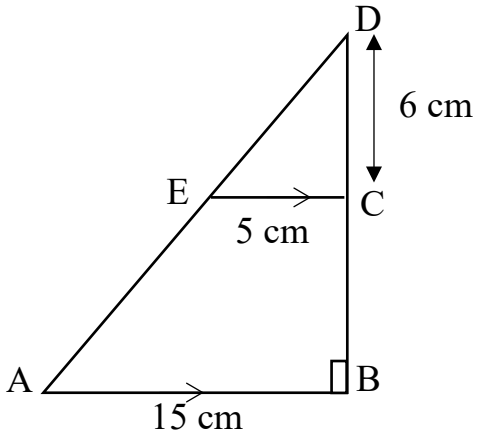
4.





The volume of the cone and the hemisphere are same.
Find the radius of the hemisphere correct to 1dp.

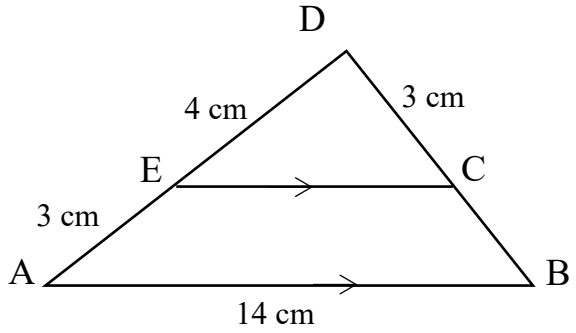
5.



Find the length CB.

Dharana Siriwarnage, PGD (maths), BSc

6.

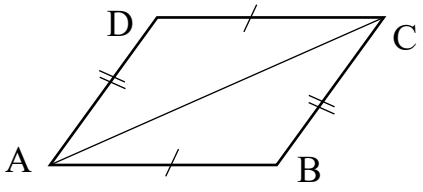


$AB = 14cm \quad AE = 3cm$
$ED = 4cm \quad CD = 3cm$

a) Find the length CE.
b) Find the length CB.

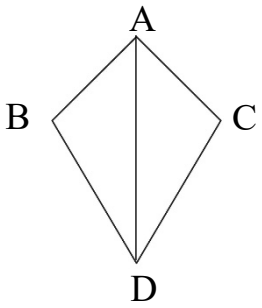
7.

a)



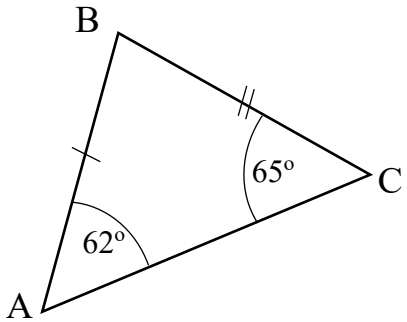
$ABCD$ is a parallelogram. Prove that triangles ABC and ACD are congruent.

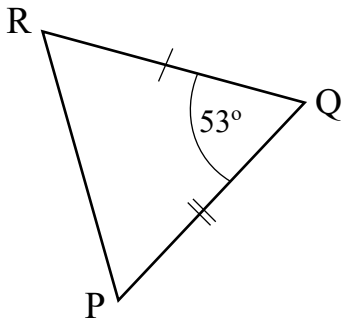
b)



$ABCD$ is a kite. AD is the symmetrical line. Prove that triangles ABD and ACD are congruent.

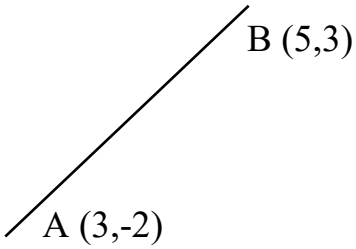
8.





Show that triangles ABC and PQR are congruent.

9.



a) Find the coordinates at midpoint of line AB.
b) Find the length of line segment AB.

10. Dave invested £7 500 in a savings account for 5 years.
He was paid 2.3% per annum compound interest for the first 3 years.
He was paid r% interest for the last 2 years.
Dave had £8518.50 in his savings account at the end of 5 years.
Work out the value of r. Give the answer correct to 1dp.