

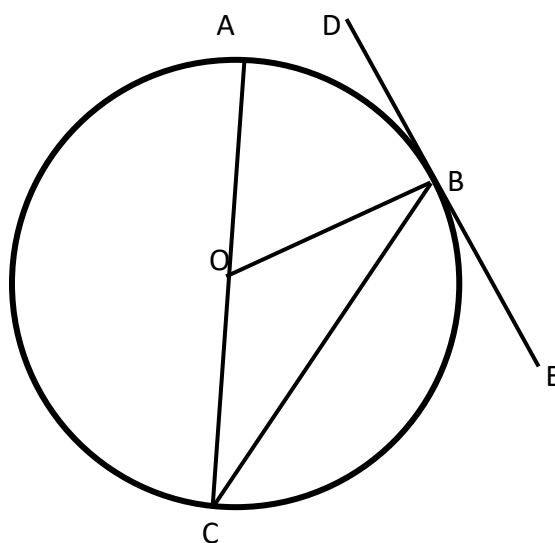
15. Express as a fraction in its simplest form

$$\frac{3b}{2a} - \frac{5}{4a^2}$$

16. A surcharge of 12% had to be added to the price of a holiday.
If the final cost is £2349.60, work out the price before the surcharge was added.

17. In the diagram below:

- O is the centre of the circle
- A, B and C lie on the circumference of the circle
- DE is a tangent to the circle



- a) State the size of angle EBO. Explain.
 - b) If angle EBC = 58°, state the size of angle OBC.
 - c) Work out the size of angle AOB. Explain.
18. The volume of a cylinder is 4500cm³. If the height of the cylinder is 26cm, calculate the diameter of the cylinder. Round your answer correct to 3 significant figures.
19. An asteroid is travelling through space at a speed of 3.52 x 10⁵ km/hour.
How far will the asteroid travel in one year? Round your answer to 3 significant figures.

[1 year = 365 days]

20a. Evaluate 32^{-2/5}

20b. Simplify $\sqrt{27} - 2\sqrt{3} + \sqrt{75}$

21. Calculate the area of the triangle below

