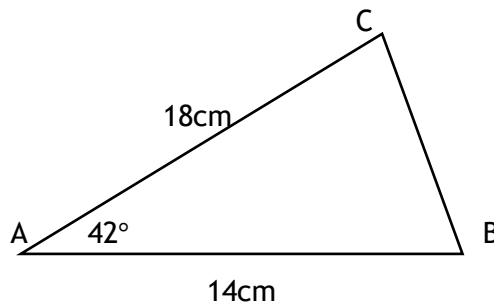


February Assessment Paper 2

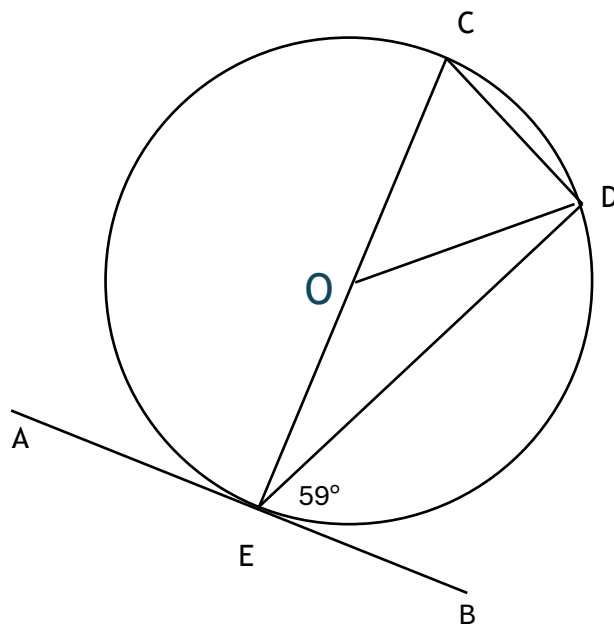
Calculator paper

1. The price of an antique painting is estimated to increase by 5% per year for next 4 years. Its current value is £870.
Calculate its estimated value after 4 years. (3)
2. A round the world trip takes in a total of 1.74×10^{12} km.
A second trip travels 75% of this distance.
Work out the distance of the second trip. Give your answer in scientific notation.
Round your answer to 3 significant figures. (3)
3. In the triangle below,
AB = 14cm ,
AC = 18cm
Angle BAC = 42°



Calculate the area of triangle ABC. (3)

4. Factorise fully $3a^2 - 75$ (2)
5. The diagram below shows a circle centre O.



- C, D and E lie on the circumference
- AB is a tangent
- Angle DEB is 59°

Calculate the size of angle OCD (3)

6. The price of a new computer desk was checked in six different high street shops. The prices, in pounds, are recorded below.

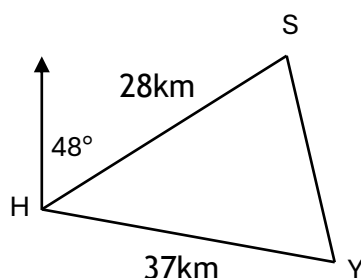
86 93 83 90 84 92

- a) Calculate the mean and standard deviation of these prices. (4)
- b) The price was also checked on six different internet sites.

The mean was £92 and the standard deviation was 3.8.

Write two valid comments comparing the prices on the high street and on the internet. (2)

7. In the diagram below,
- A ship S, is 28km from a harbour H, on a bearing of 048° .
 - A yacht Y, is 37 km from the harbour on a bearing of 116°



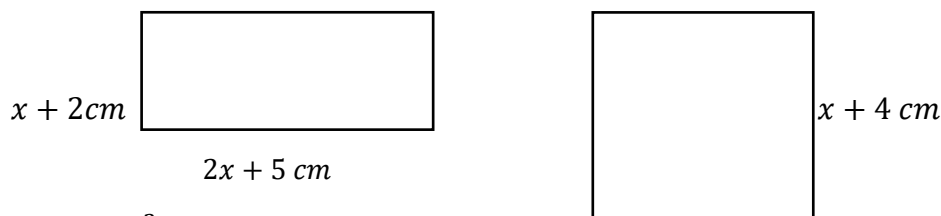
Calculate the distance between the ship and the yacht (4)

8. Solve

$$3x^2 - 4x - 6 = 0$$

Round your answer correct to one decimal place (4)

9. The rectangle and the square shown below have the same area.



- a) Show that $x^2 + x - 6 = 0$ (3)
- b) State the length of the square (2)

Total 33