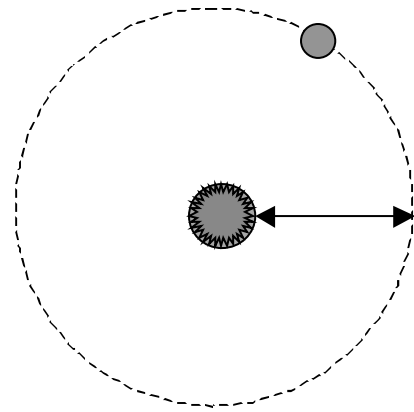
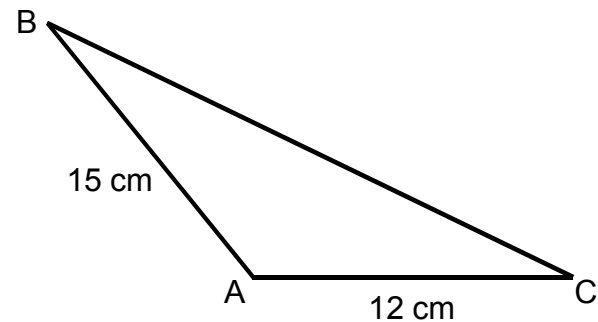




9. The distance from the planet Neptune to the Sun is approximately  $4.478 \times 10^9$  km. Assuming the orbit of Neptune around the Sun is circular, calculate the distance Neptune will travel in one orbit of the Sun.

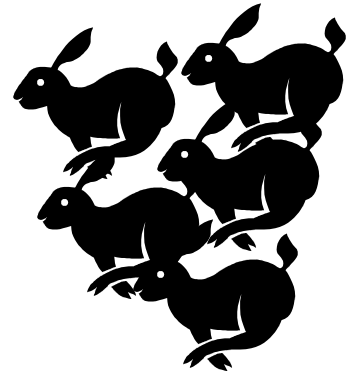


10. A triangle ABC has area  $35 \text{ cm}^2$ .  $AB = 15 \text{ cm}$  and  $AC = 12 \text{ cm}$ . Given that angle BAC is obtuse, calculate its size.



11. In 1859, 24 rabbits were introduced into Australia. By 1940 the population of rabbits had grown to approximately 480 million and by 1950 this had increased to 600 million.

- (a) Calculate the percentage increase in the rabbit population from 1940 to 1950.  
 (b) If the rabbit population had continued to increase at this percentage rate, calculate what the population would have been in the year 1990.



12. From two points A and B, 15 metres apart, the angles of elevation to the top of a tower are  $44^\circ$  and  $75^\circ$  respectively.

Calculate the height of the tower.

