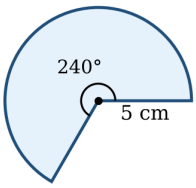
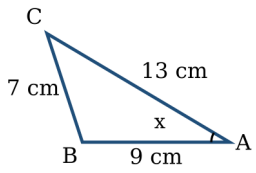
| Day 262 | A Tier 10-a-day |
|---|---|
| **1** A straight line has equation $-x + 3y = 2$<br>(a) Find the gradient of the line.<br>(b) Find the coordinates of the point where the line crosses the x-axis. | |
| **2** M is the midpoint of AB.<br>A is the point $(-4, -6)$ and M is the point $(-5, 1)$.<br>Work out the coordinates of B. | |
| **3** On a stage, a yellow beacon flashes every 12 seconds.<br>A boat's lamp flashes every 10 seconds.<br>They flash together at the start.<br>After how many seconds will they next flash together? | |
| **4** The diagram shows a sector of a circle of radius 5 cm.<br>Work out the area of the sector.<br>Give your answer in terms of $\pi$.<br>The diagram is not drawn accurately.<br> | |
| **5** The line L has equation $y = 2x + 4$<br>Find the equation of the line that is parallel to L and passes through the point (2, 9). | |

| Day 262 | A Tier 10-a-day |
|---|---|
| **6** A bag contains 5 mint and 7 fruit sweets.<br>Two sweets are taken at random without replacement.<br>Work out the probability that the two sweets are different colours. | |
| **7** A triangle has base 37 cm and perpendicular height 10 cm.<br>Each measurement is correct to the nearest cm.<br>Work out the lower bound for the area of the triangle. | |
| **8** Work out the size of angle x. (Calculator)<br>Give your answer to 1 decimal place.<br>The diagram is not drawn accurately.<br> | |
| **9** A is the point (−5, 3) and B is the point (1, −5).<br>Find the equation of the perpendicular bisector of AB. | |
| **10** A bag contains 5 black pens and 2 blue pens.<br>Three pens are taken at random without replacement.<br>Work out the probability that all three pens are black. | |