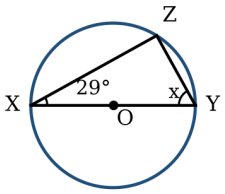
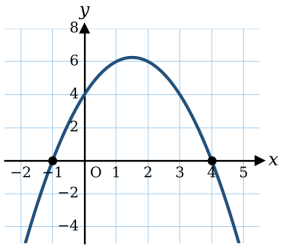
| Day 288 | A Tier 10-a-day |
|---|---|
| **1** (a) Write down all the prime numbers between 60 and 80.<br>(b) Write 209 as the product of two prime numbers. | |
| **2** Ali buys a vintage radio for £60.<br>He sells it for £69.60.<br>Work out his percentage profit. | |
| **3** XY is a diameter of the circle.<br>Angle YXZ = 29°.<br>Work out the size of angle x.<br>Give a reason for each step of your working.<br> | |
| **4** (a) Solve $2 < 3x - 1 < 14$<br>(b) Write down all the integer values of x that satisfy this inequality. | |
| **5** There are 80 passengers on a plane.<br>25% of the passengers are children.<br>60% of the children are under 5 years old.<br>How many passengers are children under 5? | |

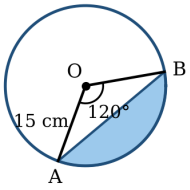
**Day 288** **A Tier 10-a-day**

**6** The diagram shows the graph of $y = -x^2 + bx + c$.
Find the value of b and the value of c.




**7** Rationalise the denominator of $\frac{2}{2\sqrt{2}}$
Give your answer in its simplest form.

**8** The diagram shows a circle with centre O and radius 15 cm.
Angle AOB = 120°. (Calculator)
Work out the area of the shaded segment.
Give your answer to 3 significant figures.




**9** A and B are independent events.
P(A) = 0.4 and P(B) = 0.3.
(a) Work out P(A and B).
(b) Work out P(A or B).

**10** Boat P sails 8 miles from a harbour on a bearing of 125°.
Boat Q sails 11 miles from the same harbour on a bearing of 220°. (Calculator)
Work out the distance between the two boats.
Give your answer to 3 significant figures.