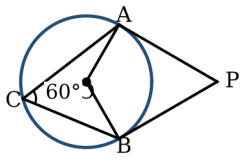
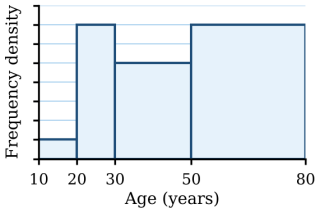
Day 49	S Tier 10-a-day
1 Zane invests £1,500 at 6% per year compound interest. After how many whole years will the investment first be worth more than £3,300? (Calculator)	
2 Simplify $(4x^6y^2)^{\frac{1}{2}}$	
3 Noah changes £300 into euros at £1 = €1.18. Noah spends €240 and then changes the rest back into pounds at £1 = €1.6. How many pounds does Noah get back?	
4 PA and PB are tangents to a circle, centre O. C is a point on the circle. Angle ACB = 60°. (a) Work out the size of angle AOB. (b) Work out the size of angle APB. The diagram is not drawn accurately. 	
5 Solve $x^2 < 6x - 5$	

Day 49	S Tier 10-a-day

6 Given that $5\sqrt{5} = \sqrt{n}$,
find the value of n.

7 Solve the simultaneous equations
$x^2 + y^2 = 17$
$y = -x + 5$

8 The histogram shows the ages of visitors to a museum.
100 of them had an age between 30 and 50 years.
(a) How many had an age between 10 and 20 years?
(b) How many visitors are there in total?



9 A rectangle has area $(2\sqrt{2})$ cm^2 and length $(2 + 2\sqrt{2})$ cm.
Find the width of the rectangle.
Give your answer in the form $a + b\sqrt{2}$

10 ABCD is a rectangle with AB = 4 cm and AD = 7 cm.
A point P inside the rectangle is such that AP ≤ 2 cm and P is nearer to AB than to AD.
Work out the area of the region in which P can lie. Give your answer in terms of π.