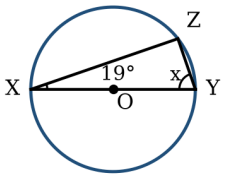
Day 263 **A Tier 10-a-day**

1 Kiran buys a games console for £230 and sells it making a profit of 30%.
Work out the selling price.

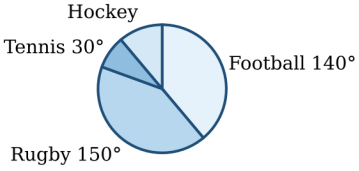
2 XY is a diameter of the circle.
Angle YXZ = 19°.
Work out the size of angle x.
Give a reason for each step of your working.



3 Solve $7x + 4 < 3x - 16$

4 Solve $5^{2x-2} = 25$

5 The pie chart shows how some students chose a sport.
3 students chose tennis.
(a) Work out the angle for hockey.
(b) How many students chose hockey?



Day 263 **A Tier 10-a-day**

6 A ladder of length 10 m rests against a vertical wall. (Calculator)
The foot of the ladder is 3 m from the wall on horizontal ground.
Work out the angle between the ladder and the ground. Give your answer to 1 decimal place.

7 The table shows the probabilities of the outcomes of a biased spinner.
(a) Work out the value of x.
(b) The spinner is spun 100 times. Estimate the number of times it lands on 3.

Score	1	2	3	4
Probability	0.3	x	x	0.6

8 A straight line passes through the points $(-2, 3)$ and $(1, -12)$.
Find the equation of the line.

9 Rationalise the denominator of $\frac{4}{2+\sqrt{3}}$

Give your answer in the form $a + b\sqrt{c}$ where a and b are integers.

10 Solve $3x^2 = 14x + 5$