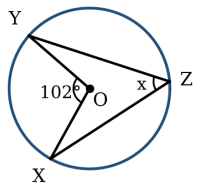
Day 319	A Tier 10-a-day
1 Hassan buys a guitar for £200 and sells it for £176. Work out Hassan's percentage loss.	
2 A ladder reaches 3 m up a vertical wall. The ladder is 5 m long. Work out how far the foot of the ladder is from the wall.	
3 Solve $2x^2 + 7x = -5$	
4 X, Y and Z are points on a circle with centre O. Angle XOY = 102°. Work out the size of angle x. Give a reason for your answer. 	
5 Work out $\sqrt{9 \times 10^6}$ Give your answer in standard form.	

Day 319	A Tier 10-a-day
6 Tara and Lena each invest £1000 for 2 years. (Calculator) Tara's account pays 10% simple interest per year. Lena's account pays 10% compound interest per year. Work out how much more interest Lena earns than Tara.	
7 Make x the subject of $y = (x + 3)^2 + 1$	
8 A runner travels 390 m in 18.1 s. The distance is measured to the nearest 10 metres and the time to the nearest 0.1 second. (Calculator) Work out the lower bound for the runner's speed in m/s. Give your answer correct to 3 significant figures.	
9 Solve the simultaneous equations $y = x^2 - 5x + 5$ $y = x$	
10 y is inversely proportional to x. When x = 25, y = 3. (a) Find a formula for y in terms of x. (b) Work out the value of y when x = 10.	