Day 345	A Tier 10-a-day
1 A circular pond has radius 13 m. Work out, in terms of π, (a) the circumference, (b) the area.	
2 Here are the scores of 11 students in a test. 32 55 48 57 50 27 44 15 49 40 56 (a) Work out the median. (b) Work out the interquartile range.	
3 (a) Factorise $16y^2 - 25z^2$ (b) Use the same idea to work out $44^2 - 6^2$ without a calculator.	
4 The size of each angle of a quadrilateral is shown as an expression: $(2x + 20)°$, $(x + 10)°$, $(3x - 30)°$, $(3x - 18)°$ Work out the value of x.	
5 Noah's weekly pay is increased by 5%. Her new weekly pay is £315. Work out her weekly pay before the increase.	

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6 Here are four fractions: $\frac{7}{15}$ $\frac{3}{6}$ $\frac{9}{30}$ $\frac{4}{5}$ Which one of these fractions is equal to a recurring decimal?	
7 An isosceles triangle has two equal sides of length (2x + 8) cm and (3x + 1) cm. The third side is 14 cm. Work out the perimeter of the triangle.	
8 Leah spends $\frac{1}{5}$ of the money on a phone case and $\frac{1}{3}$ of the money that is left on headphones. Leah has £304 left. How much money did Leah have to begin with?	
9 A is the point (2, −3) and B is the point (8, 1). Find the equation of the perpendicular bisector of AB.	
10 The value of a painting is decreased by 30%. The new value is then increased by 5%. Work out the overall percentage change.	