Day 316	B Tier 10-a-day
1 Here are four digit cards. 6 1 3 4 Use all four cards to make the largest possible number. Work out the difference between the largest and smallest possible numbers.	
2 Solve $6n + 14 = 5n + 20$	
3 The probability that a bus is late is $\frac{2}{5}$. Work out the probability that a bus is not late.	
4 A box is a cuboid measuring 30 cm by 10 cm by 10 cm. Small cubes of side 5 cm are packed into the box. How many small cubes fit in the box with no gaps?	
5 The mass of a parcel is 82.4 kg, correct to 1 decimal place. Write down the error interval for the mass. Use the letter m.	

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6 A block exerts a force of 48 N and causes a pressure of 6 N/m^2. Work out the area in contact with the ground.	
7 Factorise $x^2 - 9x$	
8 Two buses leave a bus station at 07:15. One bus leaves every 12 minutes. The other bus leaves every 18 minutes. At what time do both buses next leave together?	
9 A church spire is 47 m tall. (Calculator) Mia stands 15 m from the base of the church spire on level ground. Work out the angle of elevation of the top of the church spire from Mia. Give your answer correct to 1 decimal place.	
10 A rectangle has length $(x + 4)$ cm and width $(x - 3)$ cm. The area of the rectangle is 30 cm^2. (a) Show that $x^2 + x - 42 = 0$ (b) Hence work out the length of the rectangle.	