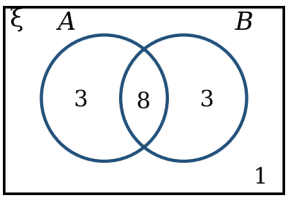
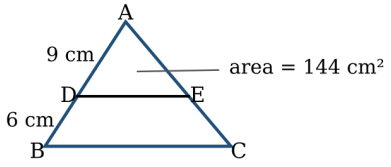
Day 95	IGCSE 10-a-day
1 Differentiate $4x^5 - 8x^4 + 2x$ with respect to x.	
2 The Venn diagram shows information about 15 pupils. A: walk to school B: cycle to school (a) Find n(A′). (b) Find n(B′). 	
3 Work out the gradient of the curve $y = x^4 - 8x^2 - 6x$ at the point where x = 0.	
4 A population grows by 20% each year for 4 years. Work out the overall percentage increase. Give your answer correct to 3 significant figures.	
5 In the diagram, DE is parallel to BC. AD = 9 cm, DB = 6 cm and the area of triangle ADE is 144 cm^2. Work out the area of the trapezium DBCE. The diagram is not drawn accurately. 	

Day 95 **IGCSE 10-a-day**

6 Expand and simplify $(1 + 2\sqrt{5})^2$
Give your answer in the form $p + q\sqrt{5}$

7 Factorise fully $(x + 3)^2 - 64$

8 $f(x) = 4x^3 + \frac{3072}{x}$
Find the values of x for which $f'(x) = 0$.

9 The table gives information about 120 times.
Work out an estimate for the median.
Assume the values in each class are evenly spread.

Time, t (minutes)	Frequency
$10 < t \leq 20$	24
$20 < t \leq 30$	19
$30 < t \leq 40$	11
$40 < t \leq 50$	30
$50 < t \leq 60$	13
$60 < t \leq 70$	23

10 a = 0.564 and b = 0.544, both correct to 3 significant figures.
Work out a ÷ b.
Write down your answer to a suitable degree of accuracy.
You must show your working and give a reason for your answer. (Calculator)