Day 274 **A Tier 10-a-day**

1 A hall is hired for £50 plus £10 for each hour.
(a) Write a formula for the total cost, £C, after h hours.
(b) Leo pays £200 in total. Work out the number of hours.

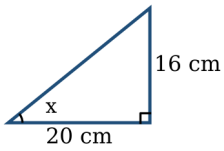
2 The frequency table shows data for 27 matches.
(a) Find the median.
(b) Work out the range.

Goals scored	0	1	2	3	4
Frequency	4	6	7	9	1

3 Expand and simplify
$4(x + 5)(x + 6) - (x + 6)(x - 6)$

4 C is the point $(-2, 1)$ and D is the point $(3, 0)$.
(a) Find the midpoint of CD.
(b) Work out the length of CD. Give your answer as a surd in its simplest form.

5 Solve $5x^2 + 4x - 5 = 0$
Give your solutions correct to 2 decimal places.
(Calculator)

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6 Expand and simplify $(3 + 3\sqrt{6})^2$ Give your answer in the form $a + b\sqrt{c}$	
7 Work out the size of angle x. (Calculator) Give your answer to 1 decimal place. The diagram is not drawn accurately.  	
8 Work out the value of (a) 3^{-3} (b) $27^{\frac{-2}{3}}$	
9 Jug A contains 11 litres of a mixture of red paint and white paint in the ratio 4 : 7. Jug B contains 28 litres of a mixture of red paint and white paint in the ratio 4 : 3. The contents of both jugs are mixed together. Work out the ratio of red paint to white paint in the mixture. Give your answer in its simplest form.	
10 Ben invests £4,500 in a savings account. (Calculator) Compound interest is paid at a fixed rate each year. After 2 years the investment is worth £4,681.80. Work out the annual rate of interest.	