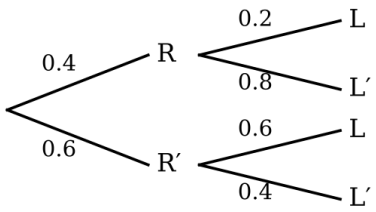
Day 309	A Level Maths: C Tier 10-a-day
1 Sketch $y = (x + 1)(x - 2)(x - 4)$. Write down the coordinates of the points where the curve meets the axes.	
2 A particle moves in a straight line. Its velocity at time t seconds is v m s^{-1}, where $v = 3t^2 - 24t + 5$. (a) Find its acceleration when $t = 3$. (b) Find the time when its acceleration is zero.	
3 Show, by a counter-example, that the statement "If n^2 is a multiple of 45 then n is a multiple of 45" is false, where n is a positive integer.	
4 A sector has radius 8 cm and area 40.0 cm^2. Find the angle of the sector in radians and the arc length.	
5 Solve $\|x + 5\| > 4$.	

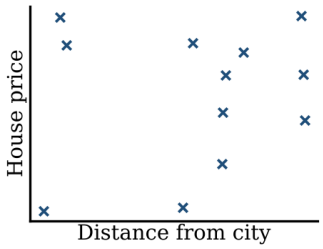
Day 309 **A Level Maths: C Tier 10-a-day**

6 The tree diagram shows probabilities for events R and L.
Find the probability that L happens.



7 Given that $dy/dx = 5x^2$ and $y = 2$ when $x = 0$, find y in terms of x.

8 The scatter diagram shows distance from city and house price for a group.
Describe the correlation.



9 The table shows values of y = f(x).

x	0	2	4	6	8
y	9	5.5	7	2.4	3.1

Use the trapezium rule to estimate the area under the curve between $x = 0$ and $x = 8$.

10 A particle slides down a rough plane inclined at angle α to the horizontal, where $\sin \alpha = \frac{4}{5}$ and the coefficient of friction is 0.5. Take $g = 9.8$ m s^{-2}. Find the acceleration.