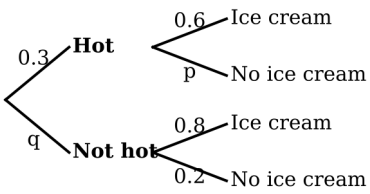
Day 175	A Tier 10-a-day
1 Ali buys a painting for £40. He sells it for £32. Work out his percentage loss.	
2 The exchange rate is £1 = €1.15. (Calculator) A hotel room costs €287.50 a night. Work out the cost in pounds.	
3 A straight line has equation $-4x + 2y = -8$ (a) Find the gradient of the line. (b) Find the coordinates of the point where the line crosses the x-axis.	
4 A rectangular table top is 250 cm by 90 cm. Work out its area in m^2.	
5 Jug A contains 36 litres of a mixture of orange juice and lemonade in the ratio 5 : 4. Jug B contains 8 litres of a mixture of orange juice and lemonade in the ratio 7 : 1. The contents of both jugs are mixed together. Work out the ratio of orange juice to lemonade in the mixture. Give your answer in its simplest form.	

Day 175	A Tier 10-a-day
6 Make w the subject of $z = \frac{4w + 8}{3}$	
7 A solid is made from a cylinder and a cone. The cylinder has radius 3 cm and height 5 cm. The cone has the same radius as the cylinder and perpendicular height 8 cm. Work out the total volume. Give your answer in terms of π.	
8 The tree diagram shows probabilities for two events. (a) Work out the values of p and q. (b) Work out the probability that Leah buys an ice cream. 	
9 A rectangle has length 13 cm and width 24 cm. Each measurement is correct to the nearest cm. Work out the lower bound for the area of the rectangle.	
10 Solve the simultaneous equations $x^2 + y^2 = 289$ $y = x - 7$	