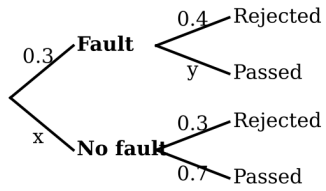
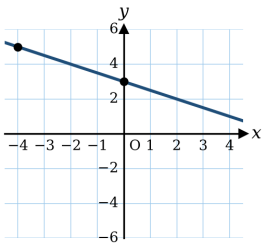
Day 50 **A Tier 10-a-day**

1 The tree diagram shows probabilities for two events.
(a) Work out the values of x and y.
(b) Work out the probability that a part is rejected at the final check.



2 The size of each angle of a quadrilateral is shown as an expression:
$(2x - 5)°$, $(3x - 25)°$, $(2x + 35)°$, $(3x + 25)°$
Work out the value of x.

3 Work out the equation of the straight line.
Give your answer in the form y = mx + c



4 (a) Show that $0.\dot{9}\dot{5} = \frac{95}{99}$

(b) Hence write $1.\dot{9}\dot{5}$ as a mixed number in its simplest form.

5 A triangle has sides of length 4 m, 6 m and 3 m.
Is the triangle right-angled?
You must show your working.

Day 50	A Tier 10-a-day
6 Write $0.4\dot{2}$ as a fraction in its simplest form.	
7 Here are the first five terms of a quadratic sequence. $-3, -13, -27, -45, -67$ (a) Find an expression for the nth term. (b) Work out the 8th term.	
8 m = 900 is rounded to 1 significant figure. Write down the error interval for m.	
9 A table exerts a force of 80 N on the floor. The area in contact with the floor is 4 m^2. Work out the pressure on the floor in N/m^2.	
10 The point P(8, −6) lies on a circle with centre O(0, 0). (a) Work out the equation of the circle, in the form $x^2 + y^2 = r^2$. (b) Find the equation of the tangent to the circle at P.	