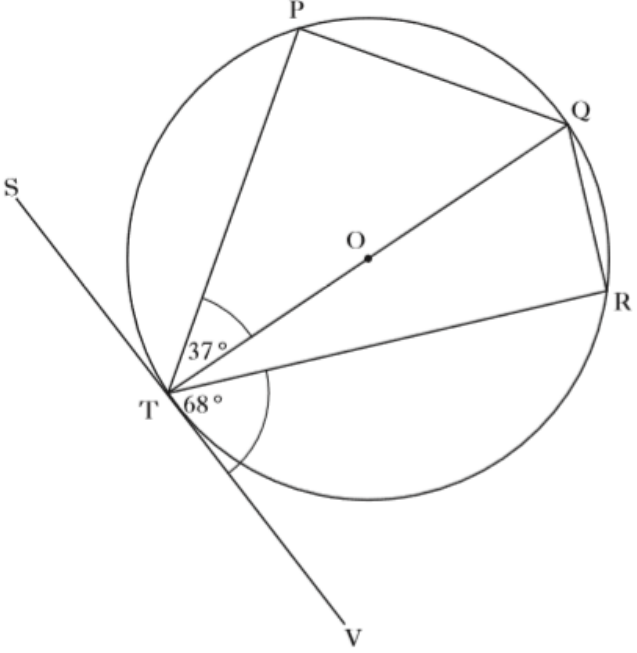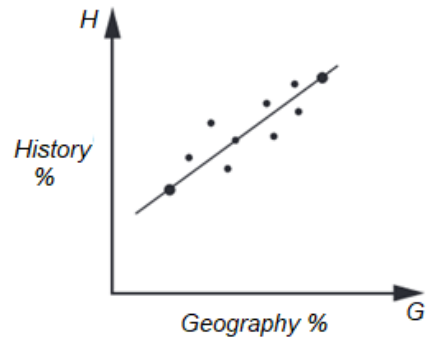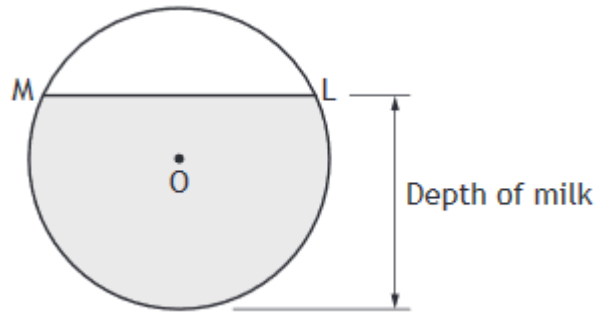| C	Nat 5 September Revision	38
1	9 couples compete in a dance competition. The couples were given a score in each round. The scores from the first round were 16 27 12 18 26 21 22 18 17	
	a) Calculate the median and interquartile range for these scores	**3**
	b) In the second round the median was 21 and the interquartile range was 9. Make two valid comparisons between the scores in the first and second rounds.	**2**
2	Shares in a company are decreasing steadily at a rate of 11% each month. Ray has shares which are currently worth £30,000. How much will their shares be worth in 4 months' time? Give your answer to 2 significant figures.	**4**
3	Multiply out the brackets and collect like terms $(4x - 7)(x^2 - 3x + 2)$	**3**
4
For the diagram above:

   • The tangent SV touches the circle, centre O, at T
   • Angle PTQ is 37° and angle VTR is 68°.

Calculate the size of angle PQR | **3** |

5	Change the subject of the formula $s = \frac{1}{2}at^2$ to a	**2**
6	Solve the inequality $20 - (5x + 6) \leq x + 11$ Give your answer in the simplest form	**3**
7	Pupil performance in a History and a Geography exam were recorded. The graph shows the percentages scored by each pupil. Jana scored 20% in Geography and 30% in History. Jayden scored 80% in Geography and 75% in History. Find the equation of the line of best fit. Give your answer in terms of H and G in the simplest form.	**3**
8	Two families go to the cinema. The Sinclair family buy tickets for 2 adults and 3 children. The total cost of their tickets is £55.60. (g) Write down an equation to illustrate this information.	**1**
	The Taylor family buy tickets for 3 adults and 5 children. The total cost of their tickets is £87.35. (h) Write down an equation to illustrate this information.	**1**
	(i) Calculate the cost of one ticket for a child and for an adult.	**4**
9	Express $\frac{5}{x+2} + \frac{4}{x-3}$, $x \neq -2$, $x \neq 3$, as a single fraction in the simplest form	**3**
10	A straight line has an equation $5x + 2y - 20 = 0$. Find the gradient of this straight line	**2**
11	The diagram shows the circular cross-section of a milk tank.	

- The radius of the circle, centre O, is 1.5 metres
- The depth of milk in the tank is 2.7 metres.

Calculate the width of the surface of the milk, represented by chord ML.

4