

December Daily Tasks Days 15 - 21

15. The price of a new mobile phone is researched on 6 different websites. Their prices, in pounds, are shown below.

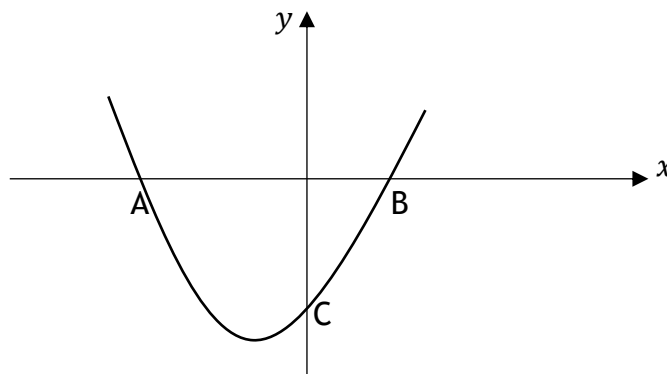
120 115 142 152 132 143

- a) Calculate the mean and standard deviation of these prices.
 b) The same model of mobile phone is researched in the high street. The mean price is £148 and the standard deviation is 2.95.

Make two valid comments about the cost of the mobile phone.

16. The diagram below shows part of the graph with equation $y = x^2 + 5x - 14$.

- a) State the coordinates of A and B, the roots of the equation.
 b) State the coordinates of C, the point where the graph intersects the y axis.



- 17 a) Fully factorise

$$3p^2 - 48$$

- b) Hence simplify

$$\frac{3p^2 - 48}{2p^2 + 5p - 12}$$

18. Find the equation of the straight line passing through $(-2, 3)$ and parallel to the line with equation $2x - 5y + 6 = 0$.

19. Line L_1 has equation $3x + 2y = 11$.

Line L_2 has equation $4x - 3y = 26$.

Find the point of intersection of these lines.

20. A function has equation $f(x) = x^2 + 8x - 4$.

Write the function in the form $f(x) = (x + a)^2 + b$ and state the coordinates of its turning point.

21. Expand and simplify $(2x - 5)(x + 2)(x - 3)$