

National 5

Short Task 18

Round all answers to an appropriate degree of accuracy unless specifically stated

1. Write down the gradient and y-intercept of the straight line passing through the points (3,7) and (0,6).

2. Write without brackets

$$\left(\frac{3}{4}x^4y^2\right)^3$$

3. The prices of almond milk are compared in 6 different shops. They are shown below, in pence:

87 95 98 84 78 80

- a). Calculate the mean and standard deviation of the prices.
- b). In another 6 shops, the mean is 93 pence and standard deviation is 3.82.

Make 2 valid comments about the prices of almond milk across both sets of shops.

4. Fully simplify

$$\frac{3x^5 \times 10x^4}{6x^7}$$

5. Solve this system of equations:

$$4x - 3y = 5$$

$$5x + 2y = 12$$

6. A planet with a diameter of 5.36×10^{36} is assumed to be a perfect sphere. Calculate its volume. Round your answer correct to 3 significant figures.

$$\text{Volume of sphere} = \frac{4}{3}\pi r^3$$