

National 5

Short Task 15

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

1. Express as a single fraction in its simplest form

$$\frac{5a}{3b^2} \div \frac{4a^2}{9b}$$

2. Solve this system of equations

$$5x - 3y = 12$$

$$4x + y = 13$$

3. Evaluate $4a^{-1/2}$ when $a = 36$, leaving your answer in its simplest form

4. In a 20% OFF sale, a TV costs £572.

Work out the full price of the TV when it is not in the sale. Give your answer to the nearest pound.

5. The height of 6 pupils (in centimetres) is recorded below:

152 142 148 161 150 177

- a). Calculate the mean and standard deviation of this data.

- b). The heights of 6 other pupils were also recorded.

Their average was measured as 162cm and the standard deviation was 1.87.

Make 2 valid comments about the heights of both groups.

- 6a) Factorise

$$3x^2 + 10x - 8.$$

- 6b) Hence, write this as a single fraction in its simplest form

$$\frac{12x - 8}{3x^2 + 10x - 8}$$

