Round all answers to an appropriate degree of accuracy unless specifically stated
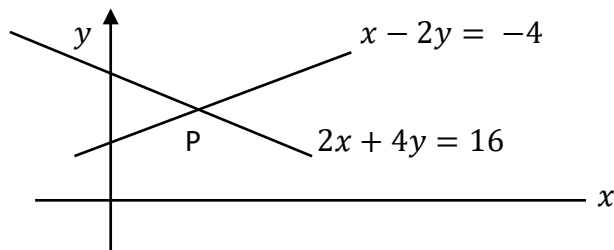
1. In an attempt to highlight global warming, a television channel will now devote an extra 8% of its airtime advertising and programs to this.

    If it now has a total of 89 hours per year, how much time was given to this before the channel decided to adopt this increase?

2. Find the point of intersection P of the 2 straight lines shown below.

3. Evaluate $32^{2/5}$

4. Express

    $$\frac{4}{\sqrt{12}}$$

    with a rational denominator in its simplest form.

5a. The price of fuel in six different towns is recorded below. All prices are shown tot the nearest pence.

    | 132 | 133 | 129 | 131 | 138 | 135 |

    Calculate the mean and standard deviation of these prices.

5b. The prices in a neighbouring town were also recorded in 6 garages. The mean was 136p and their standard deviation was 1.18.

    Write down 2 valid comments comparing the prices in each of the towns.

6a. Factorise
    $$2x^2 - 3x - 20$$

6b. Hence simplify
    $$\frac{4x^2 - 25}{2x^2 - 3x - 20}$$