

## ES3 - N5 Applications of Maths (Numeracy)

### Expressing a Quantity as a Percentage

Worked Solutions Courtesy of Mr R.Milton

$$\textcircled{1} \quad \text{INCREASE} = 68 - 50 \\ = \underline{\underline{18}}$$

$$\% \text{ INCREASE} = \frac{\text{INCREASE}}{\text{ORIGINAL}} \times 100$$

$$= \frac{18}{50} \times 100$$

$$= \underline{\underline{36\%}} \quad \checkmark$$

$$\textcircled{2} \quad \text{DECREASE} = 300 - 219 \\ = \underline{\underline{81ml}}$$

$$\% \text{ DECREASE} = \frac{\text{DECREASE}}{\text{ORIGINAL}} \times 100$$

$$= \frac{81}{300} \times 100$$

$$= \underline{\underline{27\%}} \quad \checkmark$$

$$\textcircled{3} \quad \text{DECREASE} = 65 - 57 \\ = \underline{8 \text{ kg}}$$

$$\% \text{ DECREASE} = \frac{8}{65} \times 100 \\ = \underline{12.3\%} \checkmark$$

$$\textcircled{4} \quad \text{INCREASE} = 18.4 - 15 = \underline{3.4 \text{ cm}}$$

$$\% \text{ INCREASE} = \frac{3.4}{15} \times 100 \\ = \underline{22.7\%} \checkmark$$

$$\textcircled{5} \quad \text{INCREASE} = 19600 - 18000 \\ = \underline{\pounds 1,600}$$

$$\% \text{ INCREASE} = \frac{1600}{18000} \times 100 \\ = \underline{8.9\%} \checkmark$$

$$\textcircled{6} \quad \text{DECREASE} = 3000\text{ml} - 1640\text{ml} \\ = \underline{1360\text{ml}}$$

$$\% \text{ DECREASE} = \frac{1360}{3000} \times 100 \\ = \underline{45.3\%} \checkmark$$

$$\textcircled{7} \quad \text{INCREASE} = 6040 - 5000 \\ = \underline{1040\text{m}}$$

$$\% \text{ INCREASE} = \frac{1040}{5000} \times 100$$

$$= \underline{20.8\%} \checkmark$$

$$\textcircled{8} \quad \text{INCREASE} = 174 - 154 = 20\text{cm}$$

$$\% \text{ INCREASE} = \frac{20}{154} \times 100$$

$$= \underline{13.0\%} \text{ (1DP)} \checkmark$$

$$\textcircled{9} \text{ DECREASE} = 8000 - 3758 \\ = \underline{4242}$$

$$\% \text{ DECREASE} = \frac{4242}{8000} \times 100 \\ = \underline{53.0\%}$$

$$\textcircled{10} \text{ DECREASE} = 500 - 290 \\ = \underline{210 \text{ mm}}$$

$$\% \text{ DECREASE} = \frac{210}{500} \times 100 \\ = \underline{42\%} \quad \checkmark$$

AQ

$$\textcircled{1} \text{ LOSS} = 95 - 40 \\ = \underline{55}$$

$$\% \text{ LOSS} = \frac{55}{95} \times 100 \\ = \underline{57.9\%} \quad \checkmark$$

$$\textcircled{2} \text{ INCREASE} = 619 - 584 \\ = \underline{35}$$

$$\% \text{ INC} = \frac{35}{584} \times 100 \\ \text{(GROWTH)} \\ = \underline{6\%} \quad \checkmark$$