

Bronze

1a. $9\text{km} = 900\text{m}$ corrected to $9\text{km} = 9,000\text{m}$.

$3,000\text{g} = 30\text{kg}$ corrected to $3,000\text{g} = 3\text{kg}$
or $30,000\text{g} = 30\text{kg}$.

2a. False, True, True, True.

3a. $3\text{kg} < 4,000\text{g}$, $3,000 > 2\text{kg}$,
 $80\text{km} = 80,000\text{m}$, $4,000\text{m} > 2\text{km}$

4a. $8,000\text{m}$

1b. $40,000\text{m}$, $10,000\text{m}$

2b. $2\text{kg} = 2,000\text{g}$, $5,000\text{g} > 2\text{kg}$,
 $5,000\text{g} > 2,000\text{g}$

3b. Jack is not correct. $4 \times 500\text{g} = 2,000\text{g}$.
 $2,000\text{g}$ is equivalent to 2kg . $2 \times \text{£}3 = \text{£}6$ so
4 bunches of bananas would cost $\text{£}6.00$

Silver

5a. $700\text{m} = 7.0\text{km}$ corrected to $700\text{m} = 0.7\text{km}$ or $7,000\text{m} = 7.0\text{km}$.

$2.7\text{kg} = 27,000\text{g}$ corrected to $2.7\text{kg} = 2,700\text{g}$ or $27\text{kg} = 27,000\text{g}$.

6a. True, True, False, False.

7a. $3.5\text{kg} < 5,500\text{g}$, $31,000\text{g} > 27\text{kg}$,
 $9.8\text{km} > 9,700\text{m}$, $4,200\text{m} = 4.2\text{km}$.

8a. 700g .

4b. First row: 0.5kg
Second row: 2.5kg
Third row: 2.3kg

5b. Various possible answers, for example:

$3.9\text{kg} > 3.3\text{kg}$, $3.3\text{kg} < 3,500\text{g}$,
 $3,500 < 3.9\text{kg}$.

6b. Ewan is not correct.

$3 \times 500\text{g} = 1,500\text{g}$, which is equivalent to
 1.5kg . $1.5 \times \text{£}2.80 = \text{£}4.20$.

Gold

9a. $3,500\text{m} = 3.05\text{km}$ corrected to $3,500\text{m} = 3.5\text{km}$ or $3,050\text{m} = 3.05\text{km}$.

$0.43\text{kg} = 4,300\text{g}$ corrected to $0.43\text{kg} = 430\text{g}$ or $4.3\text{kg} = 4,300\text{g}$.

10a. False, False, True, True.

11a. $6.78\text{kg} < 9,850\text{g}$, $7,430\text{m} > 2.73\text{km}$, $9,800\text{m} > 8.08\text{km}$, $260\text{m} = 0.26\text{km}$.

12a. 0.11km .

7b. First row: 4.74kg

Second row: 2.31kg

Third row: 6.15kg

8b. Various possible answers, for example:

$3.7\text{kg} > 3.07\text{kg}$, $3.7\text{kg} > 3,007\text{g}$, $3.07\text{kg} > 3,007\text{g}$

9b. Harrison is not correct.

10 pears would weigh $10 \times 252\text{g} = 2,520\text{g}$, which is equivalent to 2.52kg . 2.5kg would cost $2.5 \times \text{£}1.90 = \text{£}4.75$ so 2.52kg would cost more than $\text{£}4.75$.

Challenge

1. Ryan is trying to work a route for his journey. He estimates the different lengths of various routes on a map.

Route Lengths	
2.62km	0.95km
$1\frac{1}{5}\text{ km}$	2,150m
3,450m	6.11km
0.45km	1,980m
$2\frac{3}{4}\text{ km}$	$\frac{1}{2}\text{ km}$



Using at least 6 different routes above, explore which combinations he could choose which would add up to less than 10km in total.

Various possible answers including: 0.95km , $1\frac{1}{5}\text{ km}$, $2,150\text{m}$, $3,450\text{m}$, 0.45km , $\frac{1}{2}\text{ km}$

He has chosen to use 5 different routes. What is the longest route he could have chosen?

The longest route possible using only 5 routes: 6.11km , $3,450\text{m}$, $2\frac{3}{4}\text{ km}$, 2.62km , $2,150\text{m} = 17.08\text{km}$

2. Walter is trying to lose weight for a swimming competition. His current weight is 80.87kg and needs to be between 79kg to 79.5kg.

He has 2 weeks and can do one activity each day but needs to rest at least one day each week.

Activity	Weight Difference
Circuit Training	- 290g
Rowing	- 0.14kg
Skipping	- 180g
Swimming	- A quarter of a kilogram
Football	- $\frac{4}{5}$ of 350g
Running	- 0.23kg
Rest day	+ 410g



What activities could he choose to do? You must use at least 4 different activities for each week?

Various possible answers including: Week 1: Circuit training, rowing, skipping, swimming, rowing, circuit training, rest day. Week 2: Football, rowing, skipping, swimming, skipping, running, rest day. New weight: 79.14kg