White Rose Maths

1 The bar model shows that 1 kg is equal to 1,000 g.

1 kg
1,000 g

Use the bar models to complete the conversions.

a)

1 kg	1 kg	1 kg

3 kg = ☐ g

b)

1 kg	1 kg	1 kg	1 kg	1 kg

5 kg = ☐ g

c)

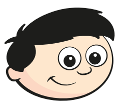
1,000 g	1,000 g	1,000 g	1,000 g

☐ kg = 4,000 g

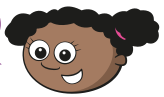
2 Fill in the missing values to convert between kilograms and grams.

kg	☐	1	2	☐	19	23.5
g	500	1,000	☐	12,000	☐	☐

3 Dexter and Whitney are converting 27.5 kg into grams.



Dexter: I'm going to use bar models.



Whitney: I'm going to use a double number line.

a) Whose method is more efficient?

Explain your answer.

b) Complete the conversion.

4 Tommy and Dora are converting 4 km into metres.

Here are their workings.

Tommy

1 km	1 km	1 km	1 km
1,000 m	1,000 m	1,000 m	1,000 m

4 km = 4,000 m

Dora

	×4	
km	1	4
m	1,000	4,000
	×4	

4 km = 4,000 m

Whose method do you prefer?

Explain your answer.

5 Complete the conversions.

a) 18 kg = ☐ g

b) 18 km = ☐ m

c) 21,000 g = ☐ kg

d) 32,500 m = ☐ km

e) 11.5 km = ☐ m

f) ☐ g = 41.2 kg

g) ☐ g = 0.1 kg

h) 100 km = ☐ m

6 Complete the conversions.

a) $\frac{1}{2}$ kg = ☐ g

$\frac{1}{4}$ kg = ☐ g

$\frac{3}{4}$ kg = ☐ g

b) $\frac{1}{10}$ km = ☐ m

$\frac{1}{5}$ km = ☐ m

$\frac{3}{10}$ km = ☐ m

4 Tommy and Dora are converting 4 km into metres.

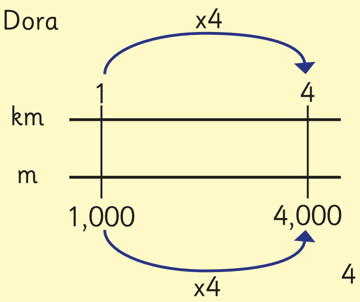
Here are their workings.

Tommy

1 km	1 km	1 km	1 km
1,000 m	1,000 m	1,000 m	1,000 m

4 km = 4,000 m

Dora



4 km = 4,000 m

Whose method do you prefer?

Explain your answer.

5 Complete the conversions.

a) 18 kg = ☐ g

b) 18 km = ☐ m

c) 21,000 g = ☐ kg

d) 32,500 m = ☐ km

e) 11.5 km = ☐ m

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6 Complete the conversions.

a) $\frac{1}{2}$ kg = ☐ g

$\frac{1}{4}$ kg = ☐ g

$\frac{3}{4}$ kg = ☐ g

b) $\frac{1}{10}$ km = ☐ m

$\frac{1}{5}$ km = ☐ m

$\frac{3}{10}$ km = ☐ m

c) $\frac{3}{6}$ kg = ☐ g

$\frac{12}{24}$ kg = ☐ g

$\frac{99}{198}$ kg = ☐ g

d) $\frac{20}{20}$ km = ☐ m

$\frac{1}{20}$ km = ☐ m

$\frac{19}{20}$ km = ☐ m

7 Write <, > or = to compare the measurements.

a) 0.5 km ◯ 600 m

b) 3.7 kg ◯ 3,200 g

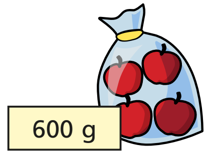
c) 5,000 g + 2 kg ◯ 5.5 kg + 1,500 g

d) $\frac{7}{10}$ km + $\frac{3}{10}$ km + 965 m ◯ 817 m + 1 km

8 A bag of apples weighs 600 g.

How much do 8 bags of apples weigh?

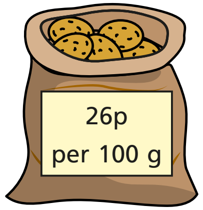
Give your answer in kilograms.



9 Ron buys 3.8 kg of potatoes and 1,250 g of carrots.

He pays with a £20 note.

How much change does he get?



10 Dora runs 200 m in 32 seconds.

If she runs at the same speed, how long will it take her to run 5 km?

Is Dora likely to be able to keep up this speed?