

# Varied Fluency

## Step 1: Kilograms and Kilometres

### National Curriculum Objectives:

Mathematics Year 5: (5M5) [Convert between different units of metric measure \(for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre\)](#)

### Differentiation:

**Developing** Questions to support converting kilometres and metres; kilograms and grams; using multiples of 10,000 or 1,000.

**Expected** Questions to support converting kilometres and metres; kilograms and grams; including numbers to 1 decimal place and some use of fractions.

**Greater Depth** Questions to support converting kilometres and metres; kilograms and grams; including numbers up to 2 decimal places and fractions, including using zero as a place holder.

More [Year 5 Converting Units](#) resources.

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# Kilograms and Kilometres

# Kilograms and Kilometres

1a. Check each of the conversions and correct any that are wrong.

$9\text{km} = 900\text{m}$        $20,000\text{g} = 20\text{kg}$

$3,000\text{g} = 30\text{kg}$        $8.0\text{kg} = 8,000\text{g}$



VF

1b. Check each of the conversions and correct any that are wrong.

$4,000\text{m} = 40\text{km}$        $1,000\text{g} = 1\text{kg}$

$6.0\text{kg} = 6,000\text{g}$        $8\text{kg} = 8,000\text{g}$



VF

2a. Complete the table:

	True or false?
$3\text{kg} < 2,000\text{g}$	
$2\text{kg} < 4,000\text{g}$	
$4\text{km} = 4,000\text{m}$	
$8,000\text{m} > 7\text{km}$	



VF

2b. Complete the table:

	True or false?
$7,000\text{g} > 7\text{kg}$	
$3\text{km} = 30,000\text{m}$	
$9\text{km} > 900\text{m}$	
$6,000\text{m} > 6\text{km}$	



VF

3a. Select a number from the box to make these statements correct.

$3\text{kg} < \underline{\hspace{2cm}} \quad \underline{\hspace{2cm}} > 2\text{kg}$

$80\text{km} = \underline{\hspace{2cm}} \quad 4,000\text{m} > \underline{\hspace{2cm}}$

4,000	80,000	3,000	2
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Include the correct unit of measurement.



VF

3b. Select a number from the box to make these statements correct.

$4\text{kg} > \underline{\hspace{2cm}} \quad \underline{\hspace{2cm}} = 90,000\text{g}$

$8,000\text{m} > \underline{\hspace{2cm}} \quad 6\text{km} < \underline{\hspace{2cm}}$

2,000	6	7,000	90
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Include the correct unit of measurement.



VF

4a. Jessica swims for 3km and runs for 5km.

How many metres does she complete altogether?



VF

4b. Louis mixes 2,000g of flour and 1,000g of sugar in a bowl.

How much does the sugar and flour weigh altogether in kilograms?



VF

## Kilograms and Kilometres

5a. Check each of the conversions and correct any that are wrong.

$$3,000\text{m} = 3.0\text{km} \quad 700\text{m} = 7.0\text{km}$$

$$1.5\text{km} = 1,500\text{m} \quad 2.7\text{kg} = 27,000\text{g}$$

$$3,300\text{g} = 3.3\text{kg} \quad 1,100\text{g} = 1.1\text{kg}$$



VF

## Kilograms and Kilometres

5b. Check each of the conversions and correct any that are wrong.

$$7.3\text{kg} = 7,300\text{g} \quad 500\text{m} = 0.5\text{km}$$

$$4,900\text{m} = 49\text{km} \quad 8.8\text{kg} = 8,800\text{g}$$

$$20,200\text{m} = 2.0\text{km} \quad 3,200\text{m} = 3.2\text{km}$$



VF

6a. Complete the table:

	True or false?
$3\text{kg} > 2,500\text{g}$	
$27\text{kg} > 2,070\text{g}$	
$4.2\text{km} = 420\text{m}$	
$420\text{m} > 4.2\text{km}$	



VF

6b. Complete the table:

	True or false?
$7,000\text{g} > 6.5\text{kg}$	
$3\text{km} = 30,000\text{m}$	
$9\text{km} > 900\text{m}$	
$6,000\text{m} > 6.1\text{km}$	



VF

7a. Select a number from the box to make these statements correct.

$$3.5\text{kg} < \underline{\quad\quad\quad} \quad \underline{\quad\quad\quad} > 27\text{kg}$$

$$9.8\text{km} > \underline{\quad\quad\quad} \quad 4,200\text{m} = \underline{\quad\quad\quad}$$

4.2	9,700	5,500	31,000
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Include the correct unit of measurement.



VF

7b. Select a number from the box to make these statements correct.

$$3.4\text{kg} > \underline{\quad\quad\quad} \quad \underline{\quad\quad\quad} = 9,900\text{g}$$

$$800\text{m} > \underline{\quad\quad\quad} \quad 6.7\text{km} < \underline{\quad\quad\quad}$$

0.6	7,600	9.9	3,300
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Include the correct unit of measurement.



VF

8a. If Miles uses  $\frac{3}{10}$  of a 1kg bag of flour.

How many grams are left in the bag?



VF

8b. Harvey travels  $\frac{3}{10}$  km by bike. He then walks 5km.

How many metres does he travel?



VF

## Kilograms and Kilometres

9a. Check each of the conversions and correct any that are wrong.

$$3,500\text{m} = 3.05\text{km} \quad 560\text{m} = 0.56\text{km}$$

$$1.76\text{km} = 1,760\text{m} \quad 0.43\text{kg} = 4,300\text{g}$$

$$5,510\text{g} = 5.51\text{kg} \quad 12,060\text{g} = 12.06\text{kg}$$



VF

## Kilograms and Kilometres

9b. Check each of the conversions and correct any that are wrong.

$$7.03\text{kg} = 7,030\text{g} \quad 120\text{m} = 0.12\text{km}$$

$$4,970\text{m} = 49.7\text{km} \quad 0.23\text{kg} = 230\text{g}$$

$$30,300\text{m} = 33\text{km} \quad 3,210\text{m} = 3.21\text{km}$$



VF

10a. Complete the table:

	True or false?
$3.54\text{kg} < 3,450\text{g}$	
$27.64\text{kg} < 26,740\text{g}$	
$3.02\text{km} = 3,020\text{m}$	
$4,230\text{m} < 4.32\text{km}$	



VF

10b. Complete the table:

	True or false?
$9.01\text{km} < 9,100\text{m}$	
$0.38\text{km} = 3,800\text{m}$	
$3.13\text{kg} < 3,140\text{g}$	
$3,410\text{g} < 3.43\text{kg}$	



VF

11a. Select a number from the box to make these statements correct.

$$6.78\text{kg} < \underline{\hspace{2cm}} \quad \underline{\hspace{2cm}} > 2.73\text{kg}$$

$$9,800\text{m} > \underline{\hspace{2cm}} \quad 260\text{m} = \underline{\hspace{2cm}}$$

7,430	8.08	0.26	9,850
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Include the correct unit of measurement.



VF

11b. Select a number from the box to make these statements correct.

$$4.42\text{km} > \underline{\hspace{2cm}} \quad \underline{\hspace{2cm}} = 950\text{m}$$

$$720\text{g} > \underline{\hspace{2cm}} \quad 2.37\text{kg} < \underline{\hspace{2cm}}$$

5,670	0.71	0.95	3,320
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Include the correct unit of measurement.



VF

12a. Grace throws a ball 100m and it rolls for a further 10m.

How far does the ball travel in kilometres?



VF

12b. Suha has  $3\frac{7}{10}$  kg of rice.

How many grams of rice does she have?



VF

## Varied Fluency Kilograms and Kilometres

### Developing

- 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.  $8,000\text{m}$

### Expected

- 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.  $700\text{g}$ .

### Greater Depth

- 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.  $0.11\text{km}$ .

## Varied Fluency Kilograms and Kilometres

### Developing

- 1b.  $4,000\text{m} = 40\text{km}$  corrected to  $4,000\text{m} = 4\text{km}$  or  $40,000\text{m} = 40\text{km}$ .  
 $80\text{kg} = 8,000\text{g}$  corrected to  $80\text{kg} = 80,000\text{g}$  or  $8\text{kg} = 8,000\text{g}$ .  
2b. False, False, True, False  
3b.  $4\text{kg} > 2,000\text{g}$ ,  $90\text{kg} = 90,000\text{g}$ ,  
 $8,000\text{m} > 6\text{km}$ ,  $6\text{km} < 7,000\text{m}$   
4b.  $3\text{kg}$

### Expected

- 5b.  $4,900\text{m} = 49\text{km}$  corrected to  $4,900\text{m} = 4.9\text{km}$  or  $49,000 = 49\text{km}$ .  
 $20,200\text{m} = 2.0\text{km}$  corrected to  $20,200\text{m} = 20.2\text{km}$  or  $2,000\text{m} = 2.0\text{km}$   
6b. True, False, True, False.  
7b.  $3.4\text{kg} > 3,300\text{g}$ ,  $9.9\text{kg} = 9,900\text{g}$ ,  
 $800\text{m} > 0.6\text{km}$ ,  $6.7\text{km} < 7,600\text{m}$   
8b.  $5,300\text{m}$ .

### Greater Depth

- 9b.  $4,970\text{m} = 49.7\text{km}$  corrected to  $4,970\text{m} = 4.97\text{km}$  or  $49,700\text{m} = 49.7\text{km}$ .  
 $30,300\text{m} = 33\text{km}$  corrected to  $30,300\text{m} = 30.3\text{km}$  or  $33,000\text{m} = 33\text{km}$ .  
10b. True, False, True, True.  
11b.  $4.42\text{km} > 3,320\text{m}$ ,  $0.95\text{km} = 950\text{m}$ ,  
 $720\text{g} > 0.71\text{kg}$ ,  $2.37\text{kg} < 5,670\text{g}$ .  
12b.  $3,700\text{g}$ .