

Aim: Convert between miles and kilometres.				Date:					
				Delivered By:			Support:		
Success Criteria	Me	Friend	Teacher	T	PPA	S	I	AL	GP
I can convert between miles and kilometres.				Notes/Evidence					
I can use an approximate conversion to convert from miles to kilometres and vice versa.									
I can use a variety of mental division strategies to divide any number by 5 or 8.									
I can solve problems involving conversion between miles and kilometres.									
Next Steps									
) _____									
) _____									

T	Teacher	I	Independent
PPA	Planning, Preparation and Assessment	AL	Adult Led
S	Supply	GP	Guided Practice

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Measurement: Road Trip

Aim: Convert between miles and kilometres. I can convert between miles and kilometres.	Success Criteria: I can use an approximate conversion to convert from miles to kilometres and vice versa. I can use a variety of mental division strategies to divide any number by 5 or 8. I can solve problems involving conversion between miles and kilometres.	Resources: Lesson Pack Individual whiteboards and pens – class set
	Key/New Words: Conversion, approximate, miles, kilometres.	Preparation: Differentiated Converting Metres and Kilometres Activity Sheet – one per child Extra Challenge Activity Sheet – as needed

Prior Learning: It will be helpful if children have used both metric and imperial measurements of length.

Learning Sequence

	Divide It: Children practise dividing by five and eight. To divide by five, they divide by ten, then double the answer. To divide by eight, they halve, halve and halve again.	
	Convert from Miles to Kilometres: Use the Lesson Presentation to explain that some countries use miles to measure distance and some use kilometres. It is important that we know the conversions between the two. Using the conversion 5 miles \approx 8 kilometres, children convert distances from miles to kilometres, by first dividing by 5 then multiplying by 8.	
	Convert from Kilometres to Miles: Using the conversion 8 kilometres \approx 5 miles, children convert distances from kilometres to miles, by first dividing by 8 then multiplying by 5.	
	Cycling Race: A problem involving conversion between miles and kilometres is modelled and then children complete a similar problem.	
	Converting Miles and Kilometres Activity: Children complete the Converting Miles and Kilometres Activity Sheet , converting from miles to kilometres.	
Children use the conversion 5 miles \approx 8 kilometres to convert measurements from miles to kilometres, with whole number answers. They identify the larger of two measurements, one written in kilometres, the other in miles. They solve a simple problem, comparing two mixed measurements.	Children use the conversion 5 miles \approx 8 kilometres to convert from miles to kilometres, with answers up to one decimal place. They order a set of three mixed measurements from shortest to longest. They answer two problems: one which involves conversion between miles and kilometres and the other which is a multi-step problem.	Children use the conversion 5 miles \approx 8 kilometres to convert from miles to kilometres, with answers up to one decimal place. They choose which measurement from a set is closest to the one given. They place measurements in kilometres on the correct place on a chart labelled in miles. They answer two problems: one problem which involves conversion between miles and kilometres and choosing a sensible answer to the problems and the other which is a multi-step problem. An Extra Challenge Activity Sheet is also included.

	<p>Diving into Mastery: Schools using a mastery approach may prefer to use the following as an alternative activity. These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and in fact, others may 'dive straight in' to the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding.</p> <p> Children use their knowledge of how to convert miles to kilometres and vice versa in order to complete fluency problems.</p> <p> Children explore answering reasoning problems which involve knowledge and understanding of how to convert miles to kilometres and vice versa.</p> <p> Children use problem solving skills in order to answer an open-ended task that involves a greater depth of thinking when converting miles to kilometres and vice versa.</p>	
	<p>Distance Charts: Children use a distance chart, where distances are given in miles, to calculate the difference between towns in kilometres. Some distances have been adjusted to make the calculations easier.</p>	

<p>Exploreit</p> <p>Calculateit: Children use a distance chart of the UK which records in miles. They calculate the distance between towns in kilometres.</p> <p>Investigateit: Children use the Internet to research the driving speed limits for different European countries. They can find speed limits for built up areas, outside built up areas and motorways. They record the speed limits in both miles per hour and kilometres per hour.</p>	
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Maths

Measurement

Road Trip



Aim

I can convert between miles and kilometres.

Success Criteria

- I can use an approximate conversion to convert from miles to kilometres and vice versa.
- I can use a variety of mental division strategies to divide any number by 5 or 8.
- I can solve problems involving conversion between miles and kilometres.

Divide It



What strategies can you think of for dividing by 5?

One way is to divide the number by 10, then double the answer.

Use this strategy to divide these numbers by 5.

$300 \div 5 =$	60	$105 \div 5 =$	21
$180 \div 5 =$	36	$450 \div 5 =$	90
$80 \div 5 =$	16	$355 \div 5 =$	71
$125 \div 5 =$	25	$122 \div 5 =$	24.4



Divide It



What strategies can you think of for dividing by 8?

One way is to halve the number, halve it again, then halve it again.

Use this strategy to divide these numbers by 8.

$200 \div 8 =$	25	$128 \div 8 =$	16
$120 \div 8 =$	15	$288 \div 8 =$	36
$88 \div 8 =$	11	$320 \div 8 =$	40
$168 \div 8 =$	21	$100 \div 8 =$	12.5



Divide It



Divide these numbers as quickly as you can:

$250 \div 5 =$	50	$432 \div 8 =$	54
$280 \div 8 =$	35	$145 \div 5 =$	29
$128 \div 8 =$	16	$166 \div 5 =$	33.2
$600 \div 5 =$	120	$268 \div 8 =$	33.5



Convert from Miles to Kilometres



In the UK, we mostly use miles to measure longer distances. However, in Europe, distances are measured in kilometres. We need to be able to use both units of measurement.



Which do you think is farther:
a mile or a kilometre?

**A mile is farther
than a kilometre.**



5 miles \approx 8 kilometres
What does the symbol
 \approx mean?

**It means approximately
equal to.**

**5 miles is approximately
equal to 8 kilometres.**



Convert from Miles to Kilometres



5 miles \approx 8 kilometres

To convert miles to kilometres, use this formula:

$$\text{miles} \div 5 \times 8 = \text{km}$$

Divide the miles measurement by 5, then multiply by 8.

$$85 \div 5 = 17$$

$$8 \times 17 = 136$$

85 miles \approx 136 kilometres



Convert from Miles to Kilometres



Which of these gives the correct information?

The correct information is this:

Divide the miles measurement by 8, then multiply by 5.

Divide the miles measurement by 8, then multiply by 8.

Divide the miles measurement by 5, then multiply by 8.

Divide the miles measurement by 5, then multiply by 5.



Convert from Miles to Kilometres



Convert these measurements from miles to kilometres. The first one has been done for you.

To convert from miles to kilometres:

Divide the number of miles by 5, then multiply by 8.

100 miles	$100 \div 5 = 20$ $20 \times 8 = 160$	160km
75 miles	$75 \div 5 = 15$ $15 \times 8 = 120$	120km
135 miles	$135 \div 5 = 27$ $27 \times 8 = 216$	216km
200 miles	$200 \div 5 = 40$ $40 \times 8 = 320$	320km
95 miles	$95 \div 5 = 19$ $19 \times 8 = 152$	152km



Convert from Miles to Kilometres



When you have a distance which isn't a multiple of 5, your answer will be a decimal number.

$$89 \div 5 = 17.8$$

$$17.8 \times 8 = 142.4$$

89 miles \approx 142.4 kilometres

Convert these distances from miles to kilometres:

Miles	Calculation	Kilometres
36 miles	$36 \div 5 = 7.2$ $7.2 \times 8 = 57.6$	57.6 kilometres
122 miles	$122 \div 5 = 24.4$ $24.4 \times 8 = 195.2$	195.2 kilometres
74 miles	$74 \div 5 = 14.8$ $14.8 \times 8 = 118.4$	118.4 kilometres



Convert from Kilometres to Miles



How could you convert kilometres to miles using
8 kilometres \approx 5 miles?

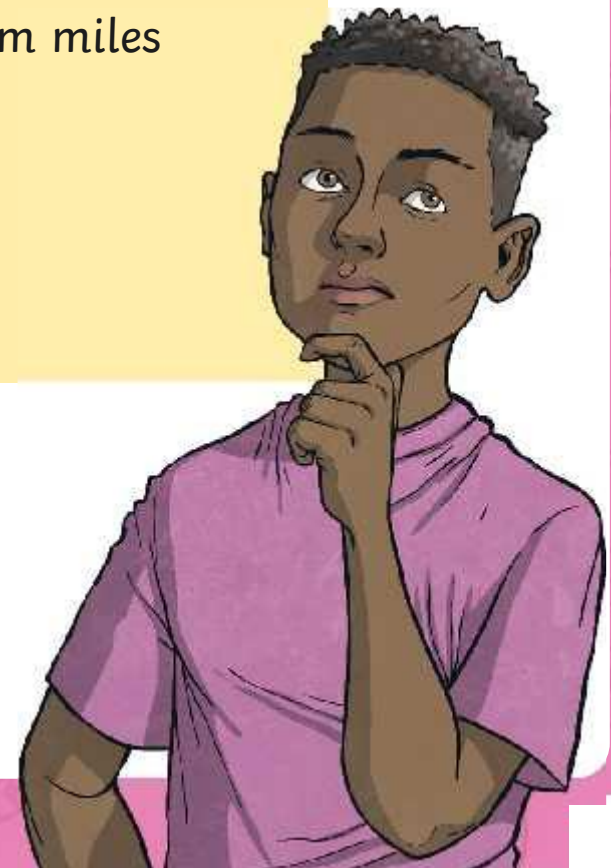
First divide by 8, then multiply by 5.
This is the inverse of what we did to convert from miles
to kilometres.

88 kilometres \approx ? miles

$$88 \div 8 = 11$$

$$11 \times 5 = 55$$

88km \approx 55 miles



Convert from Kilometres to Miles

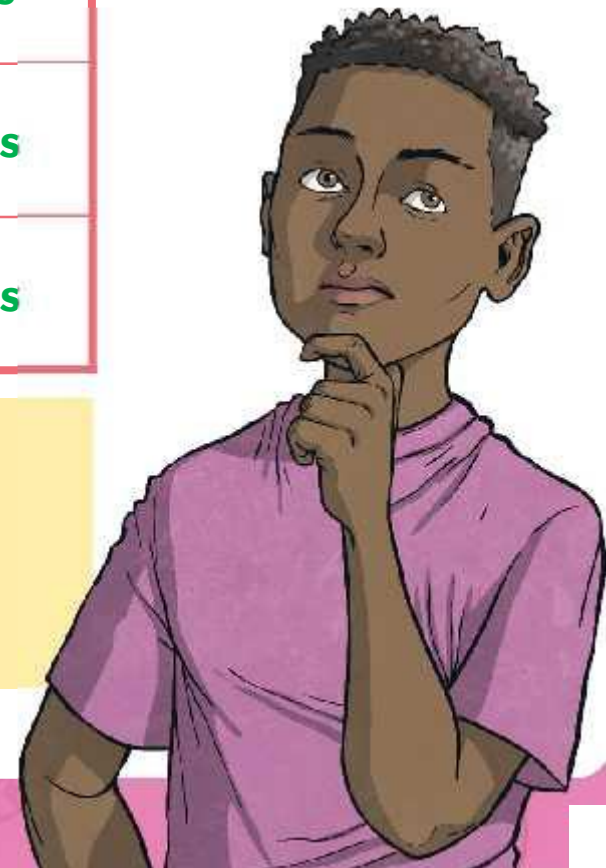


Convert these distances from kilometres to miles:

Kilometres	Calculation	Miles
96km	$96 \div 8 = 12$ $12 \times 5 = 60$	60 miles
208km	$208 \div 8 = 26$ $26 \times 5 = 130$	130 miles
168km	$168 \div 8 = 21$ $21 \times 5 = 105$	105 miles

To convert from kilometres to miles:

Divide the number of kilometres by 8, then multiply by 5.



Convert from Kilometres to Miles

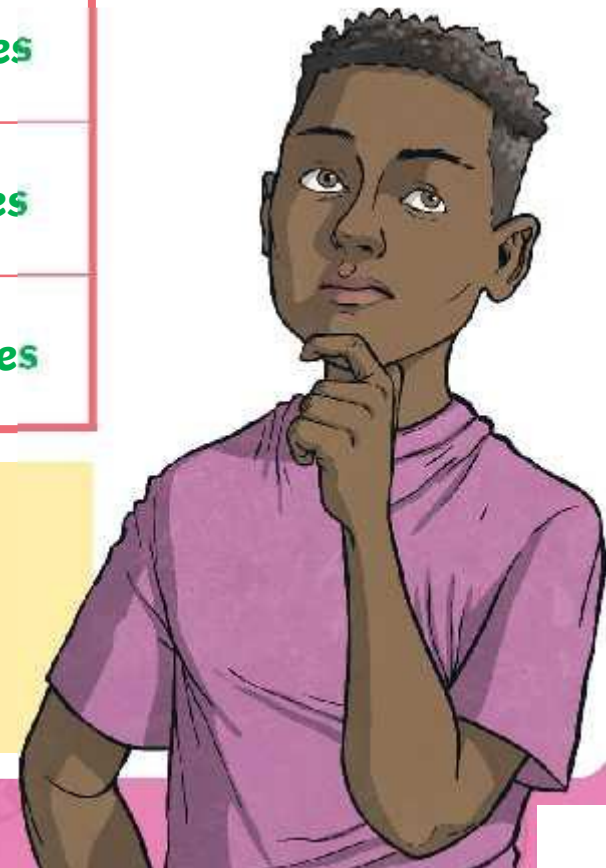


These distances are not multiples of 8. The first conversion has been completed. Complete the other conversions.

Kilometres	Calculation	Miles
84km	$84 \div 8 = 10.5$ $10.5 \times 5 = 52.5$	52.5 miles
108km	$108 \div 8 = 13.5$ $13.5 \times 5 = 67.5$	67.5 miles
300km	$300 \div 8 = 37.5$ $37.5 \times 5 = 187.5$	187.5 miles

To convert from kilometres to miles:

Divide the number of kilometres by 8, then multiply by 5.



Cycling Race



Patrick is taking part in a cycling race.
Here are the distances of the first 5 stages of the race.



Do the first 5 stages cover more than 800km?

Here is one way you could answer this question:

Can you think of any other ways you could solve the problem?

- Convert the miles to kilometres.
- Add this to the kilometres measurements.
- Compare this to 800km.

- 320 miles \approx 512km
- 512km + 55km + 197km = 764km
- **No, the first 5 stages cover less than 800km.**

Stage	Distance
1	122 miles
2	55km
3	104 miles
4	197km
5	94 miles

Cycling Race



Here are the distances of the last 5 stages of the race.

?

Do the last 5 stages cover more than 800km?

- $79 \text{ miles} + 78 \text{ miles} + 93 \text{ miles} = 250 \text{ miles}$
- $250 \text{ miles} \approx 400\text{km}$
- $400\text{km} + 160\text{km} + 242\text{km} = 802\text{km}$
- **Yes, the last 5 stages cover more than 800km.**

Stage	Distance
6	79 miles
7	160km
8	78 miles
9	93 miles
10	242km



Converting Miles and Kilometres



Use your wonderful skills to complete these activity sheets:

1 Converting Miles and Kilometres

1. Convert 100 miles to kilometres.

100 miles is the same as 160.9 kilometres.
To convert from miles to kilometres, multiply the miles by 1.6.

2. Complete the table by converting the miles to kilometres and the kilometres to miles. The first one is done for you.

100 miles	$100 \times 1.6 = 160.9$	
160.9 miles		
250 miles		
400 miles		
600 miles		
750 miles		
900 miles		
1000 miles		

3. Write the following in words: a) 1000 miles b) 1000 kilometres

100 miles	1000m	1000k
2500m	100 miles	200 miles
1000 miles	2500k	2000

2 Converting Miles and Kilometres

1. Convert 100 miles to kilometres.

100 miles is the same as 160.9 kilometres.
To convert from miles to kilometres, multiply the miles by 1.6.

2. Complete the table by converting the miles to kilometres and the kilometres to miles. The first one is done for you.

100 miles	$100 \times 1.6 = 160.9$	
200 miles		
300 miles		
400 miles		

3. Convert the following miles to kilometres and kilometres to miles. Write the answers in the table below.

100 miles	$100 \times 1.6 = 160.9$	
200 miles	$200 \times 1.6 = 321.8$	
300 miles		
400 miles		

3 Converting Miles and Kilometres

1. Convert 100 miles to kilometres.

100 miles is the same as 160.9 kilometres.
To convert from miles to kilometres, multiply the miles by 1.6.

2. Complete the table by converting the miles to kilometres and the kilometres to miles. The first one is done for you.

100 miles	$100 \times 1.6 = 160.9$	1000m
200 miles		
300 miles		
400 miles		
500 miles		

3. Convert the following miles to kilometres and kilometres to miles. Write the answers in the table below.

m	100 miles	160.9k
k	200 miles	321.8k
m	300 miles	482.7k

Distance Tables



Here is a distance table where the distances are given in miles. Use the conversion information to say approximately how many kilometres it is between these cities. (The distances are not all geographically accurate.)

	Southampton	Sheffield	Portsmouth	Oxford	Nottingham
Southampton		195	17	65	160
Sheffield	195		208	130	38
Portsmouth	17	208		80	175
Oxford	65	130	80		78
Nottingham	160	38	175	78	

Nottingham to Portsmouth:
280km

Southampton to Sheffield:
312km

Portsmouth to Oxford:
128km

To convert from miles to
kilometres:

Divide the number of miles
by 5, then multiply by 8.

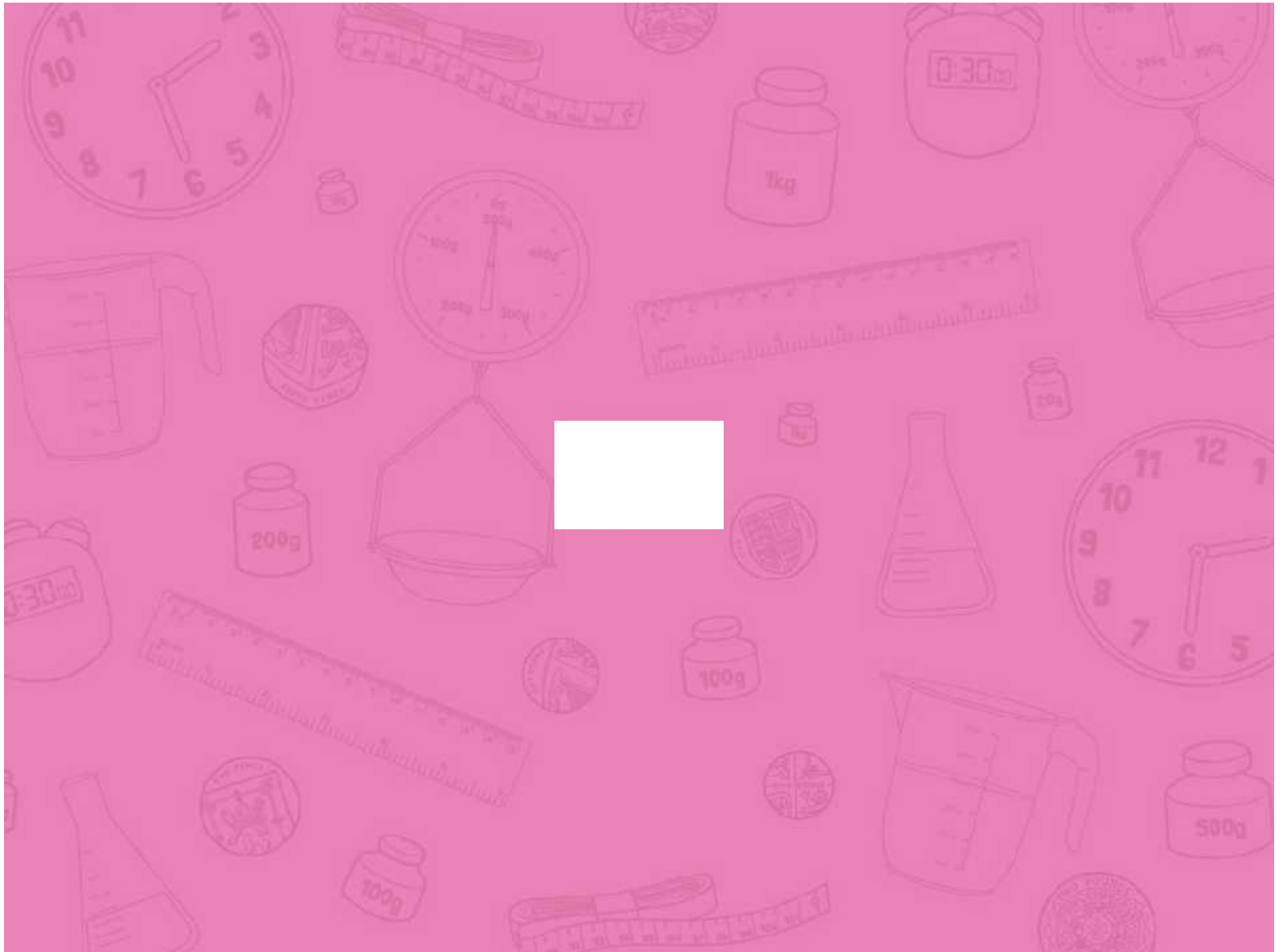
Aim



I can convert between miles and kilometres.

Success Criteria

- I can use an approximate conversion to convert from miles to kilometres and vice versa.
- I can use a variety of mental division strategies to divide any number by 5 or 8.
- I can solve problems involving conversion between miles and kilometres.





Converting Miles and Kilometres

I can convert between miles and kilometres.



To convert from miles to kilometres, divide the number of miles by 5, then multiply by 8.

1. Use the conversion information above to convert these measurements from miles to kilometres. The first one has been done for you.

100 miles	$100 \div 5 = 20$ $20 \times 8 = 160$	160km
120 miles		
150 miles		
125 miles		
155 miles		

2. Draw a circle around the larger measurement.

- a) 50 miles 50km
- b) 200 miles 350km
- c) 160 miles 240km



To convert from kilometres to miles, divide the number of kilometres by 8, then multiply by 5.

3. Use the conversion information above to convert these measurements from kilometres to miles. The first one has been done for you.

160km	$160 \div 8 = 20$ $20 \times 5 = 100$	100 miles
320km		
144km		
176km		
272km		

4. Place a tick by the measurements which are greater than 75 miles.

	Tick if greater than 75 miles
136km	
104km	
128km	

5. Two friends go for a drive. Harry records the distance of his journey as 75 miles. Franz records his journey in kilometres. The distance Franz travelled was 125km. Who travelled the farthest? Show how you worked out the answer.



Converting Miles and Kilometres Answers

1. Use the conversion information above to convert these measurements from miles to kilometres. The first one has been done for you.

100 miles	$100 \div 5 = 20$ $20 \times 8 = 160$	160km
120 miles	$120 \div 5 = 24$ $24 \times 8 = 192$	192km
150 miles	$150 \div 5 = 30$ $30 \times 8 = 240$	240km
125 miles	$125 \div 5 = 25$ $25 \times 8 = 200$	200km
155 miles	$155 \div 5 = 31$ $31 \times 8 = 248$	248km

2. Draw a circle around the larger measurement.

- a) 50 miles 50km
b) 200 miles 350km
c) 160 miles 240km

3. Use the conversion information above to convert these measurements from miles to kilometres. The first one has been done for you.

160km	$160 \div 8 = 20$ $20 \times 5 = 100$	100 miles
320km	$320 \div 8 = 40$ $40 \times 5 = 200$	200 miles
144km	$144 \div 8 = 18$ $18 \times 5 = 90$	90 miles
176km	$176 \div 8 = 22$ $22 \times 5 = 110$	110 miles
272km	$272 \div 8 = 34$ $34 \times 5 = 170$	170 miles



4. Place a tick by the measurements which are greater than 75 miles.

	Tick if greater than 75 miles
136km	✓
104km	
128km	✓

5. Two friends go for a drive. Harry records the distance of his journey as 75 miles. Franz records his journey in kilometres. The distance Franz travelled was 125km. Who travelled the furthest? Show how you worked out the answer.

Franz travelled the furthest.

Convert miles to kilometres:

$$75 \div 5 = 15 \times 8 = 120\text{km}$$

120km is less than 125km



Converting Miles and Kilometres

I can convert between miles and kilometres.



To convert from miles to kilometres, divide the number of miles by 5, then multiply by 8.

1. Use the conversion information above to convert these measurements from miles to kilometres. The first one has been done for you.

150 miles	$150 \div 5 = 30$ $30 \times 8 = 240$	240km
220 miles		
195 miles		
325 miles		

2. Convert these measurements from miles to kilometres. As the measurements are not multiples of 5, the calculations will include decimals.

132 miles	$132 \div 5 = 26.4$ $26.4 \times 8 = 211.2$	211.2km
198 miles		
231 miles		
179 miles		



To convert from kilometres to miles, divide the number of kilometres by 8, then multiply by 5.

3. Use the conversion information above to convert these measurements from kilometres to miles. The first one has been done for you.

184km	$184 \div 8 = 23$ $23 \times 5 = 115$	115 miles
216km		
192km		
320km		

4. Convert these measurements from kilometres to miles. As the measurements are not multiples of 8, the calculations will include decimals.

132km	$132 \div 8 = 16.5$ $16.5 \times 5 = 82.5$	82.5 miles
196km		
236km		
220km		

5. Order these measurements from shortest to longest:

a)

42km	30 miles	20 miles
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shortest longest

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b)

190km	100 miles	115 miles
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shortest longest

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Converting Miles and Kilometres Answers

1. Use the conversion information above to convert these measurements from miles to kilometres. The first one has been done for you.

150 miles	$150 \div 5 = 30$ $30 \times 8 = 240$	240km
220 miles	$220 \div 5 = 44$ $44 \times 8 = 352$	352km
195 miles	$195 \div 5 = 39$ $39 \times 8 = 312$	312km
325 miles	$325 \div 5 = 65$ $65 \times 8 = 520$	520km

2. Convert these measurements from miles to kilometres. As the measurements are not multiples of 5, the calculations will include decimals.

132 miles	$132 \div 5 = 26.4$ $26.4 \times 8 = 211.2$	211.2km
198 miles	$198 \div 5 = 39.6$ $39.6 \times 8 = 316.8$	316.8km
231 miles	$231 \div 5 = 46.2$ $46.2 \times 8 = 369.6$	369.6km
179 miles	$179 \div 5 = 35.8$ $35.8 \times 8 = 286.4$	286.4km

3. Use the conversion information above to convert these measurements from kilometres to miles. The first one has been done for you.

184km	$184 \div 8 = 23$ $23 \times 5 = 115$	115 miles
216km	$216 \div 8 = 27$ $27 \times 5 = 135$	135 miles
192km	$192 \div 8 = 24$ $24 \times 5 = 120$	120 miles
320km	$320 \div 8 = 40$ $40 \times 5 = 200$	200 miles



4. Convert these measurements from kilometres to miles. As the measurements are not multiples of 8, the calculations will include decimals.

132km	$132 \div 8 = 16.5$ $16.5 \times 5 = 82.5$	82.5 miles
196km	$196 \div 8 = 24.5$ $24.5 \times 5 = 122.5$	122.5 miles
236km	$236 \div 8 = 29.5$ $29.5 \times 5 = 147.5$	147.5 miles
220km	$220 \div 8 = 27.5$ $27.5 \times 5 = 137.5$	137.5 miles

5. Order these measurements from shortest to longest:

a)

<i>20 miles</i>	<i>42km</i>	<i>30 miles</i>
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shortest longest

b)

<i>100 miles</i>	<i>115 miles</i>	<i>190km</i>
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shortest longest

6. A marathon race lasts approximately 26 miles. Lara says that this is more than 35km. Is she right? Show how you know.
*Lara is right. $26 \div 5 \times 8 = 41.6$
 $26 \text{ miles} \approx 41.6\text{km}$. This is more than 35km.*
7. Alain is on his holidays in England. His car records his journey in kilometres. He has been told it is 75 miles to go from the port to the first town he is visiting. If he travels at 50km per hour, will he complete his journey in less than 3 hours?
 *$75 \text{ miles} = 75 \div 5 \times 8 = 120\text{km}$.
If he travels at 50km per hour, in 3 hours he could travel 150km.
He should be able to complete the journey in 3 hours.*



Converting Miles and Kilometres

I can convert between miles and kilometres.



To convert from miles to kilometres, divide the number of miles by 5, then multiply by 8.

To convert from kilometres to miles, divide the number of kilometres by 8, then multiply by 5.

1. Convert these measurements from miles to kilometres. Some of the measurements will have a decimal answer. The first one has been done for you.

175 miles	$175 \div 5 = 35$ $35 \times 8 = 280$	280km
140 miles		
285 miles		
202 miles		
319 miles		
390 miles		
241 miles		

2. Which of these measurements is closest to the first measurement given? Draw a circle around the closest.

95 miles	160km	150km	148km	151km
325km	190 miles	205 miles	250 miles	215 miles
135 miles	214km	220km	210km	225km



3. Convert these measurements from kilometres to miles. Some of the measurements will have a decimal answer. The first one has been done for you.

184km	$184 \div 8 = 23$ $23 \times 5 = 115$	115 miles
140km		
136km		
76km		
118km		
240km		
216km		

4. Place the measurements in the correct place on the table.

Below 50 Miles	Between 50 and 75 Miles	75 Miles and Above

68km

104km

92km

136km

76km

120km

5. A long-distance race lasts approximately 25 miles. A competitor has completed 25km. Which of these answers is closest to how far he has left to complete? Draw a circle around the closest answer.

a) 14km

b) 7.5 miles

c) 15 miles



6. Billy is driving from Chelmsford to Manchester. The distance between the two cities is 280km. He travels at a speed of 50 miles per hour. If he sets off at 11:00 a.m., when should he arrive?



Converting Miles and Kilometres **Answers**

1. Convert these measurements from miles to kilometres. Some of the measurements will have a decimal answer. The first one has been done for you.

175 miles	$175 \div 5 = 35$ $35 \times 8 = 280$	280km
140 miles	$140 \div 5 = 28$ $28 \times 8 = 224$	224km
285 miles	$285 \div 5 = 57$ $57 \times 8 = 456$	456km
202 miles	$202 \div 5 = 40.4$ $40.4 \times 8 = 323.2$	323.2km
319 miles	$319 \div 5 = 63.8$ $63.8 \times 8 = 510.4$	510.4km
390 miles	$390 \div 5 = 78$ $78 \times 8 = 624$	624km
241 miles	$241 \div 5 = 48.2$ $48.2 \times 8 = 385.6$	385.6km

2. Which of these measurements is closest to the first measurement given? Draw a circle around the closest.

95 miles	160km	150km	148km	151km
325km	190 miles	205 miles	250 miles	215 miles
135 miles	214km	220km	210km	225km



3. Convert these measurements from kilometres to miles. Some of the measurements will have a decimal answer. The first one has been done for you.

184km	$184 \div 8 = 23$ $23 \times 5 = 115$	115 miles
140km	$140 \div 8 = 17.5$ $17.5 \times 5 = 87.5$	87.5 miles
136km	$136 \div 8 = 17$ $17 \times 5 = 85$	85 miles
76km	$76 \div 8 = 9.5$ $9.5 \times 5 = 47.5$	47.5 miles
118km	$118 \div 8 = 14.75$ $14.75 \times 5 = 73.75$	73.75 miles
240km	$240 \div 8 = 30$ $30 \times 5 = 150$	150 miles
216km	$216 \div 8 = 27$ $27 \times 5 = 135$	135 miles

4. Place the measurements in the correct place on the table.

Below 50 Miles	Between 50 and 75 Miles	75 Miles and Above
68km	104km	136km
76km	92km	120km

5. A long-distance race lasts approximately 25 miles. A competitor has completed 25km. Which of these answers is closest to how far he has left to complete? Draw a circle around the closest answer.

a) **14km**

b) 7.5 miles

c) 15 miles

6. Billy is driving from Chelmsford to Manchester. The distance between the two cities is 280km. He travels at a speed of 50 miles per hour. If he sets off at 11:00 a.m., when should he arrive?

2:30 p.m.



- 1) The distance from London to Birmingham.
 The length of a football pitch.
 The length of the Amazon river.
 The length of your school field.

2) a)

Miles	Kilometres
10	16
15	24
30	48
100	160
1	1.6

b)

Kilometres	Miles
32	20
64	40
400	250
192	120
7.2	4.5

1) a) This is always true as 1 mile \approx 1.6km.



b) This is never true. I can use miles or kilometres to record any distance. The reason I might choose to use miles or kilometres would probably depend on where I lived. UK for example uses miles to describe distances whereas most of Europe uses kilometres.

c) This is always true as 12km \approx 7½ miles.

2) Alice is not correct as she has used = instead of \approx .

Freya is correct as 24km \approx 15 miles.

Harry is not correct as he has just doubled the number of miles to estimate the number of kilometres.

1) a) Team Roadracer:

Rod: 960km \approx 600 miles

Rachel: 1120km \approx 700 miles

Ruaridh: 2080km \approx 1300 miles

Team Tornado:

Tod: 790 miles \approx 1264km

Trish: 1055 miles \approx 1688km

Tori: 1245 miles \approx 1992km



b) 2600 miles

c) Team Roadracer has driven 4160km.

Team Tornado has driven approximately 4944km which is approximately 784km more.

d) 4160km \div 4 = 1040km

$\frac{1}{5}$ of the race = 1040 km

1040 km \times 5 = 5200km

$\frac{5}{5}$ or 1 whole race = 5200km

2) a) The entire race is approximately 5200km.

b) Team Warmwheels had 3400km left to drive (5200km - 1800km)

c) Day 1 to 3: 5200km - 1800km = 3400km

Day 4: 3400km - 600km = 2800km

Day 5: 2800km - 640km = 2160km

Day 6: 2160km - 680km = 1480km

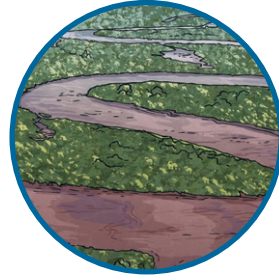
Day 7: 1480km - 720km = 760km

Day 8: 760km - 760km = 0km left to race

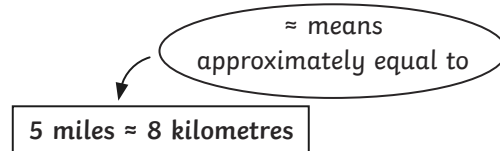
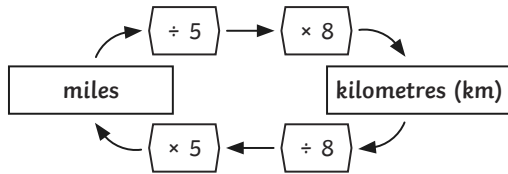
It took Team Warmwheels 8 days to complete the entire race.

1) Tick the statements that show a measurement you would record in miles.

- The distance from London to Birmingham.
- The length of a football pitch.
- The length of the Amazon river.
- The length of your school field.



2) Use the information to below to help you convert between miles and kilometres and complete the tables.

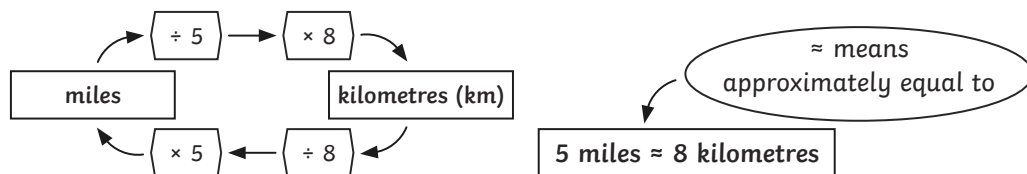


a)

Miles	Kilometres
10	
15	
	48
100	
1	

b)

Kilometres	Miles
32	
	40
400	
	120
7.2	



1) Are these statements always, sometimes or never true?

- a) A mile is longer than a kilometre. _____
- b) The distances between some places are measured in miles, others are measured in kilometres. _____
- c) 12km is a distance between 7-8 miles. _____

2) Three children have worked out approximately how many kilometres there are in 15 miles.



Alice:
15 miles = 24km



Freya:
24km \approx 15 miles



Harry:
15 miles \approx 30km

Which child do you think is correct? Explain why.



1) Team Roadracer and Team Tornado are competing in a long-distance car rally. Each driver has recorded their distances so far.

a) Convert each distance to the alternative unit.

Team Roadracer			Team Tornado
Rod: 960km \approx _____			Tod: 790 miles \approx _____
Rachel: 1120km \approx _____			Trish: 1055 miles \approx _____
Ruaridh: 2080km \approx _____			Tori: 1245 miles \approx _____

b) Approximately how far has Team Roadracer driven so far? Give your answer in miles.

c) Approximately how much further than Team Roadracer has Team Tornado driven so far? Give your answer in kilometres.

d) Team Roadracer has completed $\frac{4}{5}$ of the race. How long is the whole race in kilometres?

2) Team Warmwheels are taking part in a 3250 mile motorbike race. By the end of the third day, they had completed 1800km.

a) In kilometres, approximately how long is the entire race?

b) In kilometres, approximately how far did Team Warmwheels have left to drive?



On day 4, Team Warmwheels drove a further 600 kilometres.

On each day that followed, they drove 40 kilometres further than the day before.

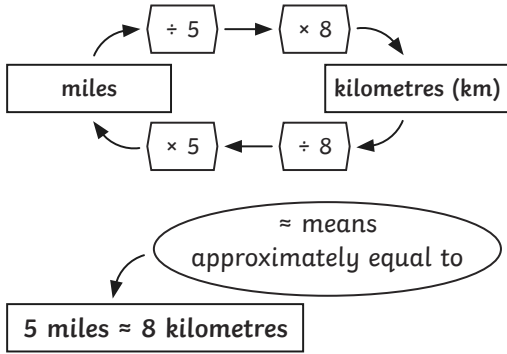
c) How many days did it take Team Warmwheels to complete the whole race?

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b)

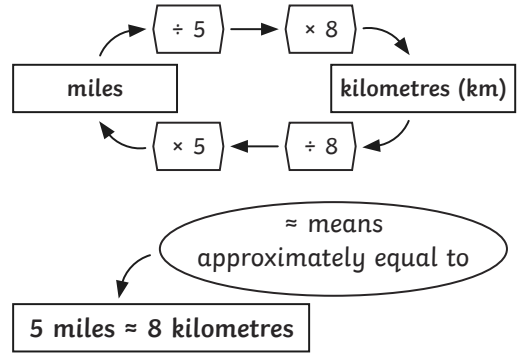
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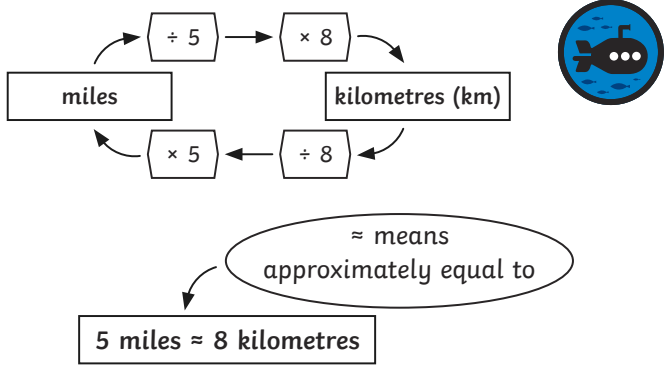


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Miles	Kilometres
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Which child do you think is correct? Explain why.



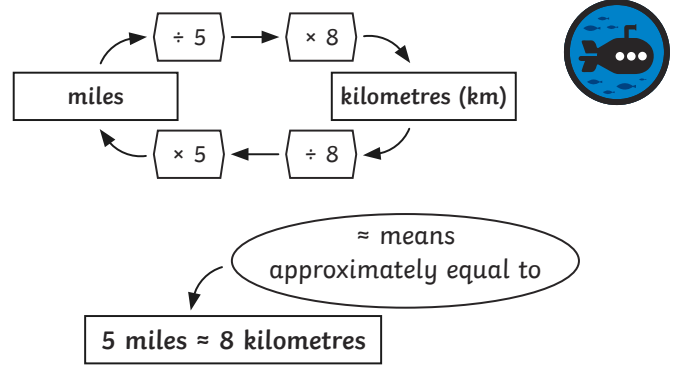
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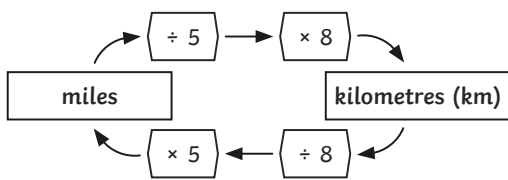
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5 miles ≈ 8 kilometres

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Convert each distance to the alternative unit.

Team Roadracer

Rod: 960km ≈ _____

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Ruaridh: 2080km ≈ _____



Team Tornado

Tod: 790 miles ≈ _____

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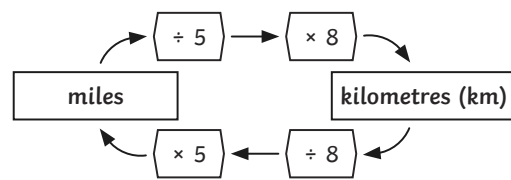
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European Flight Distances

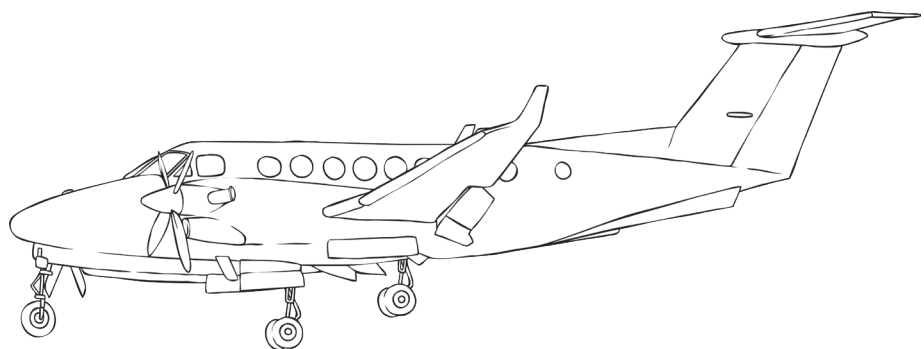
I can convert between miles and kilometres.



1. Here are the flying distances from London to various European cities. Complete the chart using the conversion $5 \text{ miles} \approx 8 \text{ kilometres}$.

City	Distance in Miles	Distance in Kilometres
Paris	215	
Rome	915	
Athens	1488	
Madrid	780	
Vienna	765	
Berlin	942	

2. A flight from London to Cairo is approximately 2200 miles. So far, the plane has travelled 1200km. Is that more or less than half of the journey?



NB. Distances may not be accurate.

European Flight Distances **Answers**

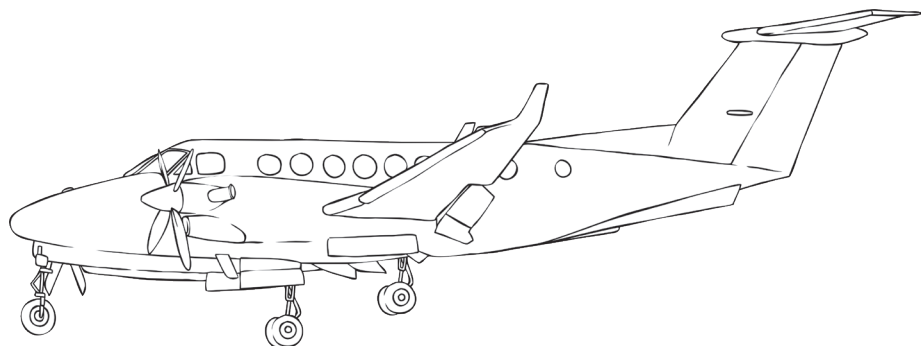
I can convert between miles and kilometres.



1. Here are the flying distances from London to various European cities. Complete the chart using the conversion 5 miles \approx 8 kilometres.

City	Distance in Miles	Distance in Kilometres
Paris	215	344
Rome	915	1464
Athens	1488	2380.8
Madrid	780	1248
Vienna	765	1224
Berlin	942	1507.2

2. A flight from London to Cairo is approximately 2200 miles. So far, the plane has travelled 1200km. Is that more or less than half of the journey?
This is less than half the journey.



NB. Distances may not be accurate.

Measurement | Road Trip

Convert between miles and kilometres.		
I can convert between miles and kilometres.		
I can use an approximate conversion to convert from miles to kilometres and vice versa.		
I can use a variety of mental division strategies to divide any number by 5 or 8.		
I can solve problems involving conversion between miles and kilometres.		

Measurement | Road Trip

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