

Using known facts to help with divisions

Work out 20×6 , 30×6 , 40×6 , 20×7 , 30×7 , 40×7 , 20×8 , 30×8 and 40×8 .

Use these facts to work out the exact answer to these divisions:

1. $129 \div 6$
2. $147 \div 7$
3. $164 \div 8$
4. $122 \div 6$
5. $162 \div 8$
6. $166 \div 8$
7. $183 \div 6$
8. $224 \div 7$
9. $244 \div 8$
10. $255 \div 6$
11. $287 \div 7$
12. $332 \div 8$

Now make up your own divisions that you can work out using the multiplication facts.

Using known facts to help with divisions

Work out 10×6 , 20×6 , 30×6 , 10×7 , 20×7 , 30×7 , 10×8 , 20×8 , 30×8 .

Use these facts to work out the exact answer to these divisions:

1. $69 \div 6$
2. $129 \div 6$
3. $77 \div 7$
4. $147 \div 7$
5. $88 \div 8$
6. $164 \div 8$
7. $122 \div 6$
8. $162 \div 8$
9. $145 \div 6$
10. $183 \div 6$

Now make up your own divisions that you can work out using the multiplication facts.

Using known facts to help with divisions

Work out 20×6 , 30×6 , 40×6 , 20×7 , 30×7 , 40×7 , 20×8 , 30×8 and 40×8 .

Use these facts to work out the exact answer to these divisions:

1. $135 \div 6$
2. $154 \div 7$
3. $172 \div 8$
4. $128 \div 6$
5. $170 \div 8$
6. $174 \div 8$
7. $195 \div 6$
8. $238 \div 7$
9. $270 \div 8$
10. $261 \div 6$
11. $294 \div 7$
12. $332 \div 8$

Now make up your own divisions that you can work out using the multiplication facts.

Multiplication and division word problems

1. A tea shop has 49 boxes of herbal tea. They come in boxes of 20 tea bags. How many tea bags do they have?

5. A family of 6 go out for a birthday meal. The bill comes to £75. How much does the meal cost per person?

2. The tea shop has 92 slices of cake left. If a cake is cut into 8 slices how many cakes is this?

6. A bus route is 38 miles. If the driver drives it 15 times in a day, how many miles is that?

3. 32 children in Year 5 have each brought 20p to buy a snack at break time. How much money have they brought in altogether?

7. A school has 217 children equally split between 7 classes. How many children are in each class?

4. How many weeks are in 154 days?

8. A top distance runner takes an average time of 5 minutes to run a mile. How long will it take to run 26 miles?

Multiplication and division word problems

1. A tea shop has 23 boxes of herbal tea. They come in boxes of 20 tea bags. How many tea bags do they have?

5. A family of 6 go out for a birthday meal. The bill comes to £63. How much does the meal cost per person?

2. The tea shop has 84 slices of cake left. If a cake is cut into 8 slices how many cakes is this?

6. A bus route is 17 miles. If the driver drives it 20 times in a day, how many miles is that?

3. 16 children in Year 5 have each brought 20p to buy a snack at break time. How much money have they brought in altogether?

7. A school has 147 children equally split between 7 classes. How many children are in each class?

4. How many weeks are in 91 days?

8. A top distance runner takes an average time of 5 minutes to run a mile. How long will it take to run 14 miles?

Multiplication and division word problems

1. A tea shop has 59 boxes of herbal tea. They come in boxes of 20 tea bags. How many tea bags do they have?

2. The tea shop has 90 slices of cake left. If a cake is cut into 8 slices how many cakes is this?

3. 37 children in Year 5 have each brought 20p to buy a snack at break time. How much money have they brought in altogether?

4. How many weeks are in 224 days?

5. A family of 6 go out for a birthday meal. The bill comes to £81. How much does the meal cost per person?

6. A bus route is 32 miles. If the driver drives it 19 times in a day, how many miles is that?

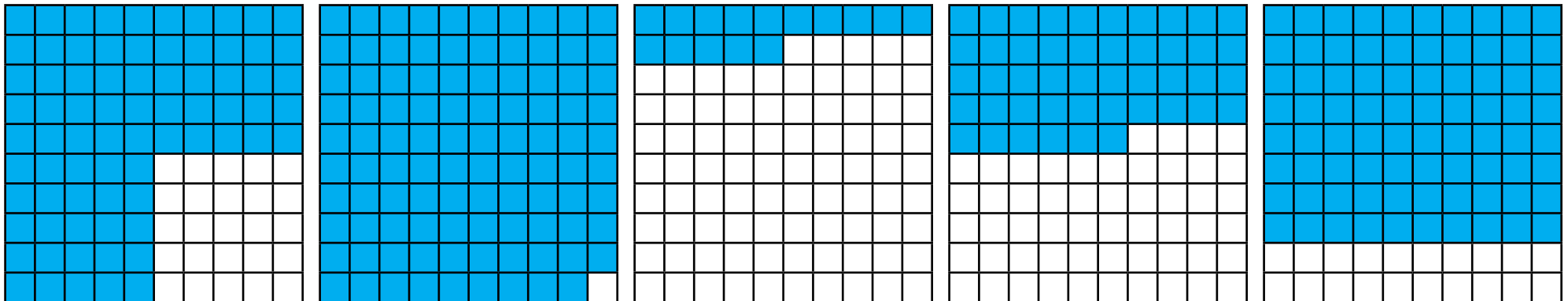
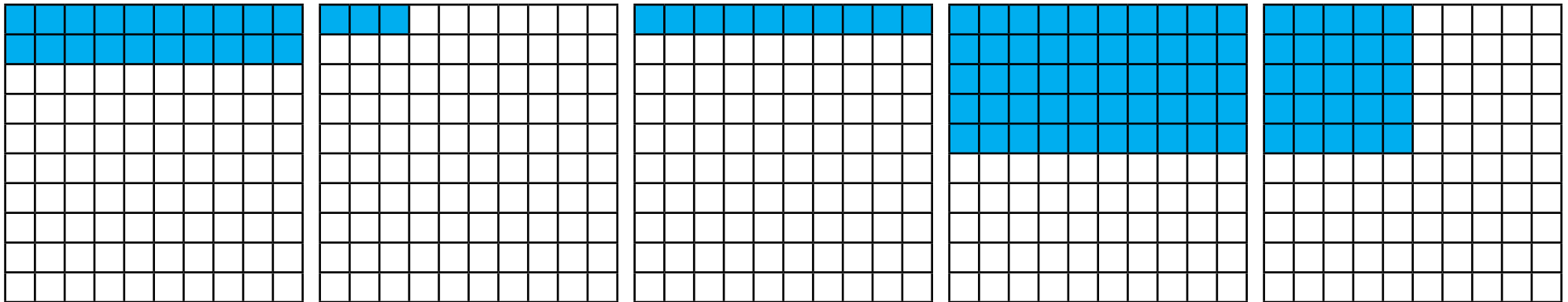
7. A school has 203 children equally split between 7 classes. How many children are in each class?

8. A top distance runner takes an average time of 5 minutes to run a mile. How long will it take to run 27 miles?

Percentages

Write the percentage of each square that is shaded, and an equivalent fraction and decimal, e.g.

$$20\% = 0.2 = \frac{1}{5}$$



Equivalent percentages

Children were asked to vote for cycling, swimming or football as their favourite weekend activity

Fraction	Percentage
$\frac{1}{2}$ children prefer swimming	
$\frac{1}{4}$ of children prefer cycling	
The rest prefer football	

All children

$\frac{1}{2}$ chose swimming	$\frac{1}{4}$ chose cycling	? chose football
?%	?%	?

Children were asked to vote for dogs, cats or rabbits as their ideal pet

Fraction	Percentage
$\frac{1}{2}$ prefer dogs	
$\frac{3}{10}$ prefer cats	
The rest prefer rabbits	

Children were asked to vote for oranges, bananas or apples as their favourite fruit

Fraction	Percentage
$\frac{4}{10}$ children prefer bananas	
$\frac{3}{10}$ of children prefer apples	
The rest prefer oranges	

Equivalent percentages

Children were asked to vote for cycling, swimming or football as their favourite weekend activity

Fraction	Percentage
$\frac{1}{2}$ children prefer swimming	
$\frac{3}{10}$ of children prefer cycling	
The rest prefer football	

Children were asked to vote for oranges, bananas or apples as their favourite fruit

Fraction	Percentage
$\frac{2}{5}$ children prefer bananas	
$\frac{3}{10}$ of children prefer apples	
The rest prefer oranges	

Children were asked to vote for dogs, cats or rabbits as their ideal pet

Fraction	Percentage
$\frac{1}{2}$ prefer dogs	
$\frac{1}{5}$ prefer cats	
The rest prefer rabbits	

Comparing percentages

The following new woodlands have been planted:

Burley Common

100 trees

50% oak, 20% ash, 15% beech, 15% willow

Merttens Meadow

300 trees

20% oak, 20% hazel, 40% willow, 20% beech

Chidgey Common

200 trees

40% oak, 30% beech, 10% ash, 20% sweet chestnut

Holes Hollow

200 trees

25% oak, 10% hazel, 20% willow, 15% beech, 30% ash

Work out which wood has the most of each tree.

Comparing percentages

The following new woodlands have been planted:

Burley Common

100 trees

50% oak, 20% ash, 15% beech, 15% willow

Merttens Meadow

150 trees

20% oak, 20% hazel, 40% willow, 20% beech

Chidgey Common

200 trees

40% oak, 30% beech, 10% ash, 20% sweet chestnut

Holes Hollow

120 trees

25% oak, 10% hazel, 15% willow, 30% beech, 20% ash

Work out which wood has the most of each tree.

Maths Answers - Summer Year 5

Week 3:

Using known facts to help with divisions

$20 \times 6 = \mathbf{120} \quad 30 \times 6 = \mathbf{180} \quad 40 \times 6 = \mathbf{240}$

$20 \times 7 = \mathbf{140} \quad 30 \times 7 = \mathbf{210} \quad 40 \times 7 = \mathbf{280}$

$20 \times 8 = \mathbf{160} \quad 30 \times 8 = \mathbf{240} \quad 40 \times 8 = \mathbf{320}$

1. $129 \div 6 = \mathbf{21 \frac{3}{6}}$ or $\mathbf{21 \frac{1}{2}}$

2. $147 \div 7 = \mathbf{21}$

3. $164 \div 8 = \mathbf{20 \frac{4}{8}}$ or $\mathbf{20 \frac{1}{2}}$

4. $122 \div 6 = \mathbf{20 \frac{2}{6}}$ or $\mathbf{20 \frac{1}{3}}$

5. $162 \div 8 = \mathbf{20 \frac{2}{8}}$ or $\mathbf{20 \frac{1}{4}}$

6. $166 \div 8 = \mathbf{20 \frac{6}{8}}$ or $\mathbf{20 \frac{3}{4}}$

7. $183 \div 6 = \mathbf{30 \frac{3}{6}}$ or $\mathbf{30 \frac{1}{2}}$

8. $224 \div 7 = \mathbf{32}$

9. $244 \div 8 = \mathbf{30 \frac{4}{8}}$ or $\mathbf{30 \frac{1}{2}}$

10. $255 \div 6 = \mathbf{42 \frac{3}{6}}$ or $\mathbf{42 \frac{1}{2}}$

11. $287 \div 7 = \mathbf{41}$

12. $332 \div 8 = \mathbf{41 \frac{4}{8}}$ or $\mathbf{41 \frac{1}{2}}$

Using known facts to help with divisions (E)

$10 \times 6 = \mathbf{60} \quad 20 \times 6 = \mathbf{120} \quad 30 \times 6 = \mathbf{180}$

$10 \times 7 = \mathbf{70} \quad 20 \times 7 = \mathbf{140} \quad 30 \times 7 = \mathbf{210}$

$10 \times 8 = \mathbf{80} \quad 20 \times 8 = \mathbf{160} \quad 30 \times 8 = \mathbf{240}$

1. $69 \div 6 = \mathbf{11 \frac{3}{6}}$ or $\mathbf{11 \frac{1}{2}}$

2. $129 \div 6 = \mathbf{21 \frac{3}{6}}$ or $\mathbf{21 \frac{1}{2}}$

3. $77 \div 7 = \mathbf{11}$

4. $147 \div 7 = \mathbf{21}$

5. $88 \div 8 = \mathbf{11}$

6. $164 \div 8 = \mathbf{20 \frac{4}{8}}$ or $\mathbf{20 \frac{1}{2}}$

7. $122 \div 6 = \mathbf{20 \frac{2}{6}}$ or $\mathbf{20 \frac{1}{3}}$

8. $162 \div 8 = \mathbf{20 \frac{2}{8}}$ or $\mathbf{20 \frac{1}{4}}$

9. $145 \div 6 = \mathbf{24 \frac{1}{6}}$

10. $183 \div 6 = \mathbf{30 \frac{3}{6}}$ or $\mathbf{30 \frac{1}{2}}$

Using known facts to help with divisions (H)

$20 \times 6 = \mathbf{120} \quad 30 \times 6 = \mathbf{180} \quad 40 \times 6 = \mathbf{240}$

$20 \times 7 = \mathbf{140} \quad 30 \times 7 = \mathbf{210} \quad 40 \times 7 = \mathbf{280}$

$20 \times 8 = \mathbf{160} \quad 30 \times 8 = \mathbf{240} \quad 40 \times 8 = \mathbf{320}$

1. $135 \div 6 = 22 \frac{3}{6}$ or $22 \frac{1}{2}$
2. $154 \div 7 = 22$
3. $172 \div 8 = 21 \frac{4}{8}$ or $21 \frac{1}{2}$
4. $128 \div 6 = 21 \frac{2}{6}$ or $21 \frac{1}{3}$
5. $170 \div 8 = 21 \frac{2}{8}$ or $21 \frac{1}{4}$
6. $174 \div 8 = 21 \frac{6}{8}$ or $21 \frac{3}{4}$
7. $195 \div 6 = 32 \frac{3}{6}$ or $32 \frac{1}{2}$
8. $238 \div 7 = 34$
9. $270 \div 8 = 33 \frac{6}{8}$ or $33 \frac{3}{4}$
10. $261 \div 6 = 43 \frac{3}{6}$ or $43 \frac{1}{2}$
11. $294 \div 7 = 42$
12. $332 \div 8 = 41 \frac{4}{8}$ or $41 \frac{1}{2}$

Multiplication and division word problems (M)

- | | |
|--|---|
| 1. $49 \times 20 = 980$ | The tea shop has 980 tea bags. |
| 2. $92 \div 8 = 11 \frac{4}{8}$ | The tea shop has 11 $\frac{1}{2}$ cakes left. |
| 3. $32 \times 20p = 640p$ or £6.40 | The children have brought in £6.40 altogether. |
| 4. $154 \div 7 = 22$ | There are 22 weeks in 154 days. |
| 5. $£75 \div 6 = £12.50$ | The meal cost £12.50 per person. |
| 6. $38 \times 15 = 570$ | The driver drives 570 miles in a day. |
| 7. $217 \div 7 = 31$ | There are 31 children in each class. |
| 8. $26 \times 5\text{min} = 130\text{min}$ | It will take the runner 2 hours and 10 minutes . |

Multiplication and division word problems (E)

- | | |
|---|---|
| 1. $23 \times 20 = 460$ | The tea shop has 460 tea bags. |
| 2. $84 \div 8 = 10 \frac{4}{8}$ | The tea shop has 10 $\frac{1}{2}$ cakes left. |
| 3. $16 \times 20p = 320p$ or £3.20 | The children have brought in £3.20 altogether. |
| 4. $91 \div 7 = 13$ | There are 13 weeks in 91 days. |
| 5. $£63 \div 6 = £10.50$ | The meal cost £10.50 per person. |
| 6. $17 \times 20 = 340$ | The driver drives 340 miles in a day. |
| 7. $147 \div 7 = 21$ | There are 21 children in each class. |
| 8. $14 \times 5\text{min} = 70\text{min}$ | It will take the runner 1 hour and 10 minutes . |

Multiplication and division word problems (H)

- | | |
|--|---|
| 1. $59 \times 20 = 1180$ | The tea shop has 1180 tea bags. |
| 2. $90 \div 8 = 11 \frac{2}{8}$ | The tea shop has 11 $\frac{1}{4}$ cakes left. |
| 3. $37 \times 20p = 740p$ or £7.40 | The children have brought in £7.40 altogether. |
| 4. $224 \div 7 = 32$ | There are 32 weeks in 224 days. |
| 5. $£81 \div 6 = £13.50$ | The meal cost £13.50 per person. |
| 6. $32 \times 19 = 608$ | The driver drives 608 miles in a day. |
| 7. $203 \div 7 = 29$ | There are 29 children in each class. |
| 8. $27 \times 5\text{min} = 135\text{min}$ | It will take the runner 2 hours and 15 minutes . |

Percentages

$$20\% = 0.2 = \frac{1}{5}$$

$$3\% = 0.03 = \frac{3}{100}$$

$$10\% = 0.1 = \frac{1}{10}$$

$$50\% = 0.5 = \frac{1}{2}$$

$$25\% = 0.25 = \frac{1}{4}$$

$$75\% = 0.75 = \frac{3}{4}$$

$$99\% = 0.99 = \frac{99}{100}$$

$$15\% = 0.15 = \frac{3}{20}$$

$$46\% = 0.46 = \frac{23}{50}$$

$$80\% = 0.8 = \frac{4}{5}$$

Equivalent percentages (E)

Children were asked to vote for cycling, swimming or football as their favourite weekend activity

Fraction	Percentage
$\frac{1}{2}$ children prefer swimming	50%
$\frac{1}{4}$ of children prefer cycling	25%
The rest prefer football	25%

Children were asked to vote for oranges, bananas or apples as their favourite fruit

Fraction	Percentage
$\frac{4}{10}$ children prefer bananas	40%
$\frac{3}{10}$ of children prefer apples	30%
The rest prefer oranges	30%

Children were asked to vote for dogs, cats or rabbits as their ideal pet

Fraction	Percentage
$\frac{1}{2}$ prefer dogs	50%
$\frac{3}{10}$ prefer cats	30%
The rest prefer rabbits	20%

Equivalent percentages (M)

Children were asked to vote for cycling, swimming or football as their favourite weekend activity

Fraction	Percentage
$\frac{1}{2}$ children prefer swimming	50%
$\frac{3}{10}$ of children prefer cycling	30%
The rest prefer football	20%

Children were asked to vote for oranges, bananas or apples as their favourite fruit

Fraction	Percentage
2/5 children prefer bananas	40%
3/10 of children prefer apples	30%
The rest prefer oranges	30%

Children were asked to vote for dogs, cats or rabbits as their ideal pet	
Fraction	Percentage
½ prefer dogs	50%
1/5 prefer cats	20%
The rest prefer rabbits	30%

Comparing percentages (E)

Burley Common has:
50 oak, 20 ash, 15 beech and 15 willow.

Merttens Meadow has:
60 oak, **60 hazel**, **120 willow** and **60 beech**.

Chidgey Common has:
80 oak, **60 beech**, 20 ash and **40 sweet chestnut**.

Holes Hollow has:
50 oak, 20 hazel, 40 willow, 30 beech and **60 ash**.

Comparing percentages (M)

Burley Common has:
50 oak, 20 ash, 15 beech and 15 willow.

Merttens Meadow has:
30 oak, **30 hazel**, **60 willow** and 30 beech.

Chidgey Common has:
80 oak, **60 beech**, 20 ash and **40 sweet chestnut**.

Holes Hollow has:
30 oak, 12 hazel, 18 willow, 36 beech and **24 ash**.