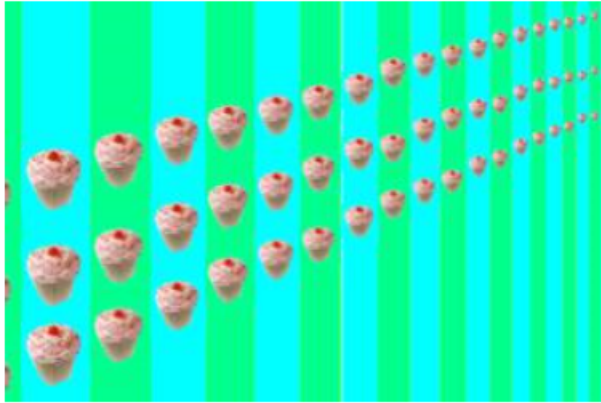


Week beginning 23.3.30, Maths

nRich 'Let us Divide!' activity

How could you answer these questions using

- Words? Pictures? Numbers? Objects? Other ways?



It's Jola's birthday and she is having a party. She has 24 cup cakes to share equally between 3 plates for the party. How many cakes will go on each plate?



Jola is going to give everyone some chocolate eggs to take home at the end of the party. They fit into egg boxes which hold 6 eggs each. Will 50 eggs be enough for each of the 8 visitors to have a box to take home?

Division

- Practise the bus stop method (see examples and questions)
- Reasoning and problem solving (choose challenge 1, 2 or 3)
- Year 3 (Y3)
- Year 4 (Y4)

Times Tables

- Practise, practise, practise!
- Times Tables Rock Stars, Top Marks Hit the Button, Top Marks Daily 10, BBC Super Movers. How creative can you be? One of the year 3s has been using sweets to help him learn and remember!

Maths

We have been exploring the 'bus stop' method.

Here are some diagrams to help you remember.

Divide 2-digit numbers by a single digit (no remainders in the final answer)

Continue to explore sharing and grouping.

$57 \div 3 = 19$

How many times does 3 go into 5?
It goes into 5 once and has a remainder of 2.

How many times does 3 go into 27?
It goes into 27 nine times and has no remainder.

3 | 57 = 19

●●●●●●●●●●

Children may use pictorial aids for support with table facts and remainders.

Divide up to 3-digit numbers by a single digit (without remainders)

SHORT DIVISION:

$872 \div 4 =$

$185 \div 4 =$

	2	1	8				
4	)	8	7	2			

	0	3	7				
5	)	1	8	5			

Divide up to 4 digits by a single digit, including those with remainder answers.

SHORT DIVISION:

$5309 \div 8 =$

		0	6	6	3	r	5		
8	)	5	3	0	9				

Divide at least 4-digit numbers by 1 or 2 digits

SHORT DIVISION:

$496 \div 11$ becomes

		4	5	r	1		
1	1	)	4	9	6		

Week beginning 23.3.30: Maths

Choose challenge A, B or C. This page does not need to be printed out. Please write in your yellow maths book the short date, which challenge you have chosen and make sure you include the question numbers.

TARGET To practise a written method for division.

Examples

$$203 \div 7$$

$$\begin{array}{r} 29 \\ 7 \overline{)203} \\ \underline{14} \\ 63 \\ \underline{63} \\ 0 \end{array} \quad \begin{array}{l} 200 \div 7 = 20 \text{ remainder } 60^{(6)} \\ 63 \div 7 = 9 \end{array}$$

Answer 29

$$172 \div 4$$

$$\begin{array}{r} 43 \\ 4 \overline{)172} \\ \underline{16} \\ 12 \\ \underline{12} \\ 0 \end{array} \quad \begin{array}{l} 170 \div 4 = 40 \text{ remainder } 10^{(1)} \\ 12 \div 4 = 3 \end{array}$$

Answer 43

A

Work out

1 $65 \div 5$ 9 $26 \div 2$

2 $96 \div 6$ 10 $126 \div 7$

3 $36 \div 2$ 11 $48 \div 3$

4 $91 \div 7$ 12 $126 \div 9$

5 $57 \div 3$ 13 $70 \div 5$

6 $153 \div 9$ 14 $136 \div 8$

7 $68 \div 4$ 15 $72 \div 4$

8 $112 \div 8$ 16 $84 \div 6$

17 A running tap loses 85 litres of water in five minutes. How much does it lose in one minute?

18 Four pencils cost 76p. How much does one pencil cost?

19 A fishmonger has 75 cod fillets. One third are on display. How many cod fillets are on display?

20 At lunchtime eight children sit at each table. How many tables are needed for 152 children?

B

Work out

1 $120 \div 8$ 9 $300 \div 12$

2 $81 \div 3$ 10 $188 \div 4$

3 $105 \div 7$ 11 $266 \div 7$

4 $171 \div 9$ 12 $225 \div 9$

5 $162 \div 6$ 13 $312 \div 8$

6 $112 \div 8$ 14 $235 \div 5$

7 $165 \div 11$ 15 $228 \div 6$

8 $153 \div 9$ 16 $182 \div 7$

17 How many 6 cm lengths can be cut from a wire 156 cm long?

18 Eight friends share the cost of a meal. The bill is £184. How much should each of the friends pay?

19 There are 238 bars of chewing gum. Altogether they equally fill seven boxes. How many bars are in each box?

20 Nine strawberries make one serving. How many servings are there in 252 strawberries?

C

Work out

1 $294 \div 7$ 9 $1232 \div 8$

2 $531 \div 9$ 10 $1538 \div 2$

3 $616 \div 8$ 11 $1242 \div 9$

4 $264 \div 4$ 12 $1014 \div 6$

5 $504 \div 6$ 13 $1592 \div 8$

6 $649 \div 11$ 14 $1148 \div 4$

7 $384 \div 8$ 15 $1092 \div 7$

8 $804 \div 12$ 16 $1476 \div 9$

17 Four identical chocolate cream eggs weigh 340g. What does one weigh?

18 An automatic handwash uses 9 ml of liquid of soap every wash. How many washes can be made from 675 ml of soap?



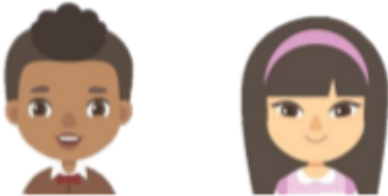





19 A pie weighs 1422g. It is cut into six equal slices. How much does each slice weigh?

20 Eight tiles have a total length of 1168 mm. What is the length of one tile in centimetres?

w/b 23.3.20 Can I divide a 2-digit number by a 1-digit number? (Y3)

Reasoning and Problem Solving









Challenge 1

<p>1a. Circle the odd one out.</p> <p>$55 \div 5$ $40 \div 5$</p> <p>$65 \div 5$ $51 \div 5$</p> <p>Explain your reasoning.</p> <p> S R</p>	<p>1b. Circle the odd one out.</p> <p>$30 \div 2$ $24 \div 2$</p> <p>$29 \div 2$ $46 \div 2$</p> <p>Explain your reasoning.</p> <p> S R</p>
<p>2a. Mr Flint has a bag of 28 sweets.</p> <p>He gives an equal number of sweets to each child in his homework club.</p> <p></p> <p>How many sweets does each child get?</p> <p> S PS</p>	<p>2b. Priya has a packet of 42 seeds.</p> <p>She plants an equal number of seeds in each of the flower boxes in her garden.</p> <p></p> <p>How many seeds are in each flower box?</p> <p> S PS</p>
<p>3a. Solve the problem below.</p> <p>I am thinking of a number.</p> <p>When I multiply my number by 3, I get the answer 39.</p> <p>What is my number?</p> <p> S PS</p>	<p>3b. Solve the problem below.</p> <p>I am thinking of a number.</p> <p>When I multiply my number by 5, I get the answer 75.</p> <p>What is my number?</p> <p> S PS</p>

w/b 23.3.20 Can I divide a 2-digit number by a 1-digit number? (Y3)

Reasoning and Problem Solving





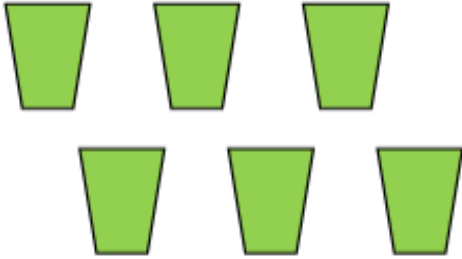



Challenge 2

<p>4a. Circle the odd one out.</p> <p>$64 \div 4$ $80 \div 4$</p> <p>$72 \div 4$ $74 \div 4$</p> <p>Explain your reasoning.</p> <p> S R</p>	<p>4b. Circle the odd one out.</p> <p>$45 \div 3$ $53 \div 3$</p> <p>$51 \div 3$ $48 \div 3$</p> <p>Explain your reasoning.</p> <p> S R</p>
<p>5a. Mr Rogers has a box of 51 books.</p> <p>He gives an equal number of books to each of his classroom helpers to put on the shelf.</p> <p></p> <p>How many books does each child get?</p> <p> S PS</p>	<p>5b. A zookeeper has 64 bamboo shoots.</p> <p>She gives an equal number of bamboo shoots to each of the pandas at the zoo.</p> <p></p> <p>How many shoots does each panda get?</p> <p> S PS</p>
<p>6a. Solve the problem below.</p> <p>I am thinking of a number.</p> <p>When I multiply my number by 8, I get the answer 80.</p> <p>What is my number?</p> <p> S PS</p>	<p>6b. Solve the problem below.</p> <p>I am thinking of a number.</p> <p>When I multiply my number by 4, I get the answer 52.</p> <p>What is my number?</p> <p> S PS</p>

w/b 23.3.20 Can I divide a 2-digit number by a 1-digit number? (Y3)

Reasoning and Problem Solving

Challenge 3

<p>7a. Circle the odd one out.</p> <p>$60 \div 6 \div 2$ $80 \div 6 \div 2$</p> <p>$72 \div 6 \div 2$ $48 \div 6 \div 2$</p> <p>Explain your reasoning.</p> <p> S R</p>	<p>7b. Circle the odd one out.</p> <p>$80 \div 8 \div 2$ $98 \div 8 \div 2$</p> <p>$96 \div 8 \div 2$ $64 \div 8 \div 2$</p> <p>Explain your reasoning.</p> <p> S R</p>
<p>8a. Jean bakes 98 cookies.</p> <p>She eats 2 of them, then gives an equal number to each of her grandchildren.</p>  <p>How many cookies does each child get?</p> <p> S PS</p>	<p>8b. Mr Stanley has a box of 88 felt tips.</p> <p>He keeps 4 of them, then puts an equal number into each of the pencil pots.</p>  <p>How many felt tips are in each pot?</p> <p> S PS</p>
<p>9a. Solve the problem below.</p> <p>I am thinking of a number.</p> <p>When I add 5 to my number then multiply by 8, I get the answer 72.</p> <p>What is my number?</p> <p> S PS</p>	<p>9b. Solve the problem below.</p> <p>I am thinking of a number.</p> <p>When I subtract 3 from my number then multiply by 6, I get the answer 72.</p> <p>What is my number?</p> <p> S PS</p>

w/b 23.3.20 Can I divide a 2-digit number by a 1-digit number? (Y3)

Answers for all three challenges.

Reasoning and Problem Solving
Divide 2-Digits by 1-Digit 1

Developing

1a. $51 \div 5$ is the odd one out because 51 does not divide exactly into 5.

2a. 14

3a. 13

Expected

4a. $74 \div 4$ is the odd one out because 74 does not divide exactly into 4.

5a. 17

6a. 10

Greater Depth

7a. $80 \div 6 \div 2$ is the odd one out because 80 does not divide equally by 6.

8a. 12

9a. 4

Reasoning and Problem Solving
Divide 2-Digits by 1-Digit 1

Developing

1b. $29 \div 2$ is the odd one out because 29 does not divide exactly into 2.

2b. 14

3b. 15

Expected

4b. $53 \div 3$ is the odd one out because 53 does not divide exactly into 3.

5b. 8

6b. 13

Greater Depth

7b. $98 \div 8 \div 2$ is the odd one out because 98 does not divide equally by 8.

















8b. 14

9b. 15

w/b 23.3.20 Can I divide a 2-digit number by a 1-digit number? (Y4)

Reasoning and Problem Solving



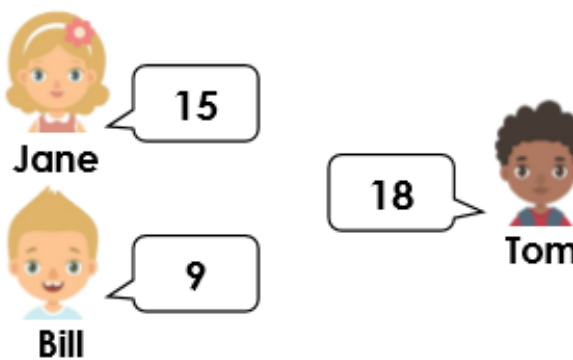
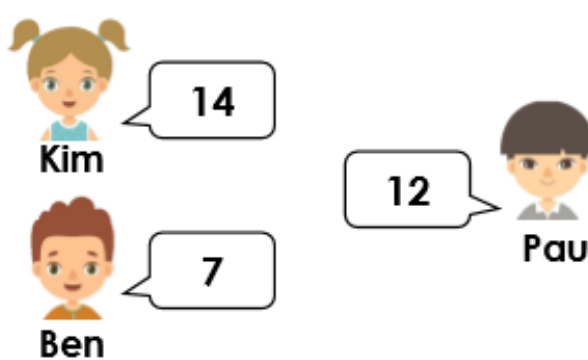
Challenge 1

<p>1a. Match the following statements with the correct card.</p>  <p>My calculation is solved incorrectly.</p>  <p>My calculation is solved correctly.</p> <p>$44 \div 4 = 11$ $33 \div 3 = 9$</p> <p> 4 PS</p>	<p>1b. Match the following statements with the correct card.</p>  <p>My calculation is solved incorrectly.</p>  <p>My calculation is solved correctly.</p> <p>$88 \div 8 = 11$ $36 \div 3 = 11$</p> <p> 4 PS</p>
<p>2a. True or false? All of these calculations can be solved without exchanging.</p> <p>$44 \div 2 = 22$</p> <p>$66 \div 3 = 22$</p> <p>$88 \div 8 = 11$</p> <p>Explain your answer.</p> <p> 4 R</p>	<p>2b. True or false? All of these calculations can be solved without exchanging.</p> <p>$84 \div 4 = 21$</p> <p>$55 \div 5 = 11$</p> <p>$66 \div 3 = 22$</p> <p>Explain your answer.</p> <p> 4 R</p>
<p>3a. Three children have answered $48 \div 4$.</p>  <p>24</p>  <p>6</p>  <p>12</p> <p>Who is correct? Explain how you know.</p> <p> 4 R</p>	<p>3b. Three children have answered $84 \div 4$.</p>  <p>21</p>  <p>22</p>  <p>42</p> <p>Who is correct? Explain how you know.</p> <p> 4 R</p>

w/b 23.3.20 Can I divide a 2-digit number by a 1-digit number? (Y4)

Reasoning and Problem Solving













Challenge 2

<p>4a. Match the following statements with the correct card.</p>  <p>My calculation needs no exchange.</p> <p>My calculation is solved incorrectly.</p> <p>My calculation needs to exchange.</p> <p>$94 \div 7 = 14$ $76 \div 4 = 19$ $84 \div 4 = 21$</p> <p>☆ 4 PS</p>	<p>4b. Match the following statements with the correct card.</p>  <p>My calculation needs no exchange.</p> <p>My calculation is solved incorrectly.</p> <p>My calculation needs to exchange.</p> <p>$84 \div 7 = 12$ $88 \div 4 = 22$ $92 \div 4 = 24$</p> <p>☆ 4 PS</p>
<p>5a. True or false? All of these calculations can be solved without exchanging.</p> <p>$48 \div 4 = 12$</p> <p>$66 \div 6 = 11$</p> <p>$96 \div 4 = 24$</p> <p>Explain your answer.</p> <p>☆ 4 R</p>	<p>5b. True or false? All of these calculations can be solved without exchanging.</p> <p>$36 \div 3 = 12$</p> <p>$22 \div 2 = 11$</p> <p>$48 \div 8 = 6$</p> <p>Explain your answer.</p> <p>☆ 4 R</p>
<p>6a. Three children have answered $90 \div 5$.</p>  <p>Jane: 15</p> <p>Bill: 9</p> <p>Tom: 18</p> <p>Who is correct? Explain how you know.</p> <p>☆ 4 R</p>	<p>6b. Three children have answered $84 \div 6$.</p>  <p>Kim: 14</p> <p>Ben: 7</p> <p>Paul: 12</p> <p>Who is correct? Explain how you know.</p> <p>☆ 4 R</p>

w/b 23.3.20 Can I divide a 2-digit number by a 1-digit number? (Y4)

Reasoning and Problem Solving

Challenge 3

<p>7a. Match the following statements with the correct card.</p> <div style="display: flex; flex-direction: column; align-items: flex-start;"> <div style="display: flex; align-items: center; margin-bottom: 10px;">  <div style="border: 1px solid black; border-radius: 15px; padding: 5px; margin-left: 10px;">My calculation needs no exchange.</div> </div> <div style="display: flex; align-items: center; margin-bottom: 10px;">  <div style="border: 1px solid black; border-radius: 15px; padding: 5px; margin-left: 10px;">My calculation is solved incorrectly.</div> </div> <div style="display: flex; align-items: center;">  <div style="border: 1px solid black; border-radius: 15px; padding: 5px; margin-left: 10px;">My calculation needs to exchange.</div> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid black; border-radius: 10px; padding: 5px;">99 ÷ 9 = 11</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px;">91 ÷ 7 = 13</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px;">86 ÷ 8 = 10</div> </div> <p style="text-align: right; font-size: small;">4 PS</p>	<p>7b. Match the following statements with the correct card.</p> <div style="display: flex; flex-direction: column; align-items: flex-start;"> <div style="display: flex; align-items: center; margin-bottom: 10px;">  <div style="border: 1px solid black; border-radius: 15px; padding: 5px; margin-left: 10px;">My calculation needs no exchange.</div> </div> <div style="display: flex; align-items: center; margin-bottom: 10px;">  <div style="border: 1px solid black; border-radius: 15px; padding: 5px; margin-left: 10px;">My calculation is solved incorrectly.</div> </div> <div style="display: flex; align-items: center;">  <div style="border: 1px solid black; border-radius: 15px; padding: 5px; margin-left: 10px;">My calculation needs to exchange.</div> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid black; border-radius: 10px; padding: 5px;">77 ÷ 7 = 11</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px;">96 ÷ 8 = 12</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px;">82 ÷ 7 = 12</div> </div> <p style="text-align: right; font-size: small;">4 PS</p>
<p>8a. True or false? All of these calculations can be solved without exchanging.</p> <div style="text-align: center; margin-top: 20px;"> $81 \div 9 = 9$ $66 \div 3 = 22$ $45 \div 3 = 15$ </div> <p>Explain your answer.</p> <p style="text-align: right; font-size: small;">4 R</p>	<p>8b. True or false? All of these calculations can be solved without exchanging.</p> <div style="text-align: center; margin-top: 20px;"> $98 \div 7 = 14$ $84 \div 7 = 12$ $66 \div 6 = 11$ </div> <p>Explain your answer.</p> <p style="text-align: right; font-size: small;">4 R</p>
<p>9a. Three children have answered $98 \div 7$.</p> <div style="display: flex; flex-direction: column; align-items: flex-start; margin-top: 20px;"> <div style="display: flex; align-items: center; margin-bottom: 20px;">  <div style="border: 1px solid black; border-radius: 15px; padding: 5px; margin-left: 10px;">16</div> </div> <div style="display: flex; align-items: center; margin-bottom: 20px;"> <div style="border: 1px solid black; border-radius: 15px; padding: 5px; margin-right: 10px;">14</div>  </div> <div style="display: flex; align-items: center;">  <div style="border: 1px solid black; border-radius: 15px; padding: 5px; margin-left: 10px;">13</div> </div> </div> <p>Who is correct? Explain how you know.</p> <p style="text-align: right; font-size: small;">4 R</p>	<p>9b. Three children have answered $81 \div 9$.</p> <div style="display: flex; flex-direction: column; align-items: flex-start; margin-top: 20px;"> <div style="display: flex; align-items: center; margin-bottom: 20px;">  <div style="border: 1px solid black; border-radius: 15px; padding: 5px; margin-left: 10px;">2</div> </div> <div style="display: flex; align-items: center; margin-bottom: 20px;"> <div style="border: 1px solid black; border-radius: 15px; padding: 5px; margin-right: 10px;">8</div>  </div> <div style="display: flex; align-items: center;">  <div style="border: 1px solid black; border-radius: 15px; padding: 5px; margin-left: 10px;">9</div> </div> </div> <p>Who is correct? Explain how you know.</p> <p style="text-align: right; font-size: small;">4 R</p>

w/b 23.3.20 Can I divide a 2-digit number by a 1-digit number? (Y4)

Answers for all three challenges.

Reasoning and Problem Solving
Divide 2-Digits by 1-Digit 1

Developing

1a. $44 \div 4 = 11$ is correct;

$33 \div 3 = 9$ is incorrect.

2a. True; all of the calculations can be solved without exchanging. Children may prove this by example.

3a. Darcy is correct; $48 \div 4 = 12$. Children may prove this by example.

Expected

4a. $94 \div 7 = 14$ is incorrect;

$76 \div 4 = 19$ needs exchanging;

$84 \div 4 = 21$ needs no exchange.

5a. False; $96 \div 4 = 24$ needs exchanging as 90 cannot be divided equally by 4.

6a. Tom is correct; $90 \div 5 = 18$. Children may prove this by example.

Greater Depth

7a. $99 \div 9 = 11$ needs no exchange;

$91 \div 7 = 13$ needs exchanging;

$86 \div 8 = 10$ is incorrect.

8a. False; $81 \div 9 = 9$ and $45 \div 3 = 15$ both need exchanges.

9a. Callum is correct; $98 \div 7 = 14$. Children may prove this by example.

Reasoning and Problem Solving
Divide 2-Digits by 1-Digit 1

Developing

1b. $88 \div 8 = 11$ is correct;

$36 \div 3 = 11$ is incorrect.

2b. True; all of the calculations can be solved without exchanging. Children may prove this by example.

3b. Jan is correct; $84 \div 4 = 21$. Children may prove this by example.

Expected

4b. $92 \div 4 = 24$ is incorrect;

$88 \div 4 = 22$ needs no exchange;

$84 \div 7 = 12$ needs exchanging.

5b. False; $48 \div 8 = 6$ needs exchange because there are 4 tens that need to be shared into 8 groups.

6b. Kim is correct; $84 \div 6 = 14$. Children may prove this by example.

Greater Depth

7b. $77 \div 7 = 11$ needs no exchange;

$96 \div 8 = 12$ needs exchanging;

$82 \div 7 = 12$ is incorrect.

8b. False; $84 \div 7 = 12$ and $98 \div 7 = 14$ both need exchanges.

9b. Jen is correct; $81 \div 9 = 9$. Children may prove this by example.