RECALL

FACTORS

10	1 , 2 , 5 , 10
12	
15	
20	
36	

RECALL

$$6 \overline{)3744} \qquad 7 \overline{)4465}$$

L.O. DIVIDE NUMBERS UP TO 4 DIGITS BY A 2-DIGIT NUMBER USING THE FORMAL WRITTEN METHOD OF SHORT DIVISION, INTERPRETING REMAINDERS ACCORDING TO THE CONTEXT.

- SOME WILL EVEN: Explain my method.
- SOME WILL: Check answer using short division.
- MOST WILL: Use known multiplication facts to aid calculation.
- ALL WILL: Use diagrams to help divide.

EXPLORE



a) How many times did the log flume run?

b) The next day the log flume ran with only 4/5 the capacity. 720 people still rode. How may times did the log flume run?

help

Use 15 = 3 x 5 – draw a diagram.

CHALLENGE!

Create another question for this picture involving division.



APE

750 ÷ 15 = or 750 ÷ 5 then ÷ 3 = 50

150			150			150			150			150		
50	50	50	50	50	50	50	50	50	50	50	50	50	50	50

$$15 \overline{)\,750} \quad 050$$

720 ÷ 12 = or 720 ÷ 2 then ÷ 6 = 60

360						360					
60	60	60	60	60	60	60	60	60	60	60	60

$$12 \overline{)\,720} \quad 060$$

EXPLORE



a) How many times did the log flume run?

b) The next day the log flume ran with only 4/5 the capacity. 600 people still rode. How may times did the log flume run?

help

Use 15 = 3 x 5 – draw a diagram.

CHALLENGE!

Create another question for this picture involving division.



APE

Intelligent Practice

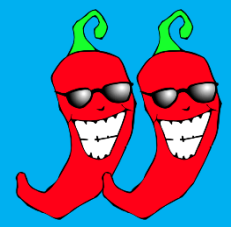
How many times did each of these rides run?



320 people rode the Runaway train. Each carriage held 16 people.



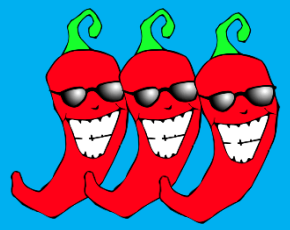
320 ÷ 16 = 16 = 2 x 8



540 people rode the Ghost train. Each carriage held 18 people.



540 ÷ ____ = 18 = ___ x ___



1,920 people rode the rollercoaster. Each carriage held 24 people.



£175,000 was made this day with tickets costing £35 per person. How many people visited in total?

Intelligent Practice

320 ÷ 16 = 16 = 2 x 8



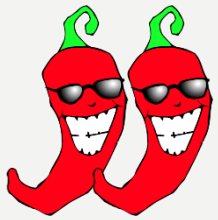
160	160

320 ÷ 2 = 160

20	20	20	20	20	20	20	20

160 ÷ 8 = 20

540 ÷ 18 = 18 = 2 x 9



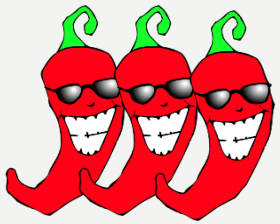
270	270

540 ÷ 2 = 270

30	30	30	30	30	30	30	30	30

270 ÷ 9 = 30

1,920 ÷ 24 = 24 = 4 x 6



480	480	480	480

1,920 ÷ 4 = 480

80	80	80	80	80	80

480 ÷ 6 = 80



175,000 ÷ 35 = 35 = 5 x 7

35,000	35,000	35,000	35,000	35,000
5000	5000	5000	5000	5000

175,000 ÷ 5 = 35,000

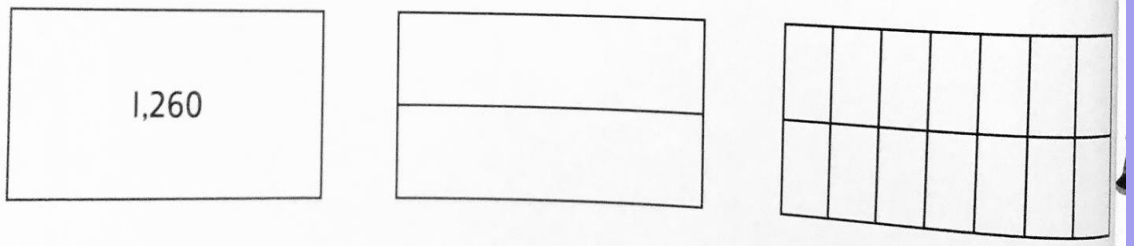
35,000 ÷ 7 = 5000

DIVE DEEPER 1

1 A new roller coaster opens at the park. 1,260 people ride on it in the first 14 days. How many people is that per day?



I know 14 is 2 × 7. I will divide by 2, and then divide by 7.



1,260 ÷ 2 = ☐

☐ ÷ 7 = ☐

☐ people ride on the new roller coaster per day.

2 Tickets for the park cost £18 per person. On one day the park made £5,490. How many tickets were sold?

Choose which method solves the division correctly, then solve it.

5,490 → ÷ 6 → ÷ 3 →

5,490 → ÷ 10 → ÷ 8 →

5,490 ÷ ☐ ÷ ☐ = ☐

☐ tickets were sold on that day.

1 A new roller coaster opens at the park. 1,260 people ride on it in the first 14 days. How many people is that per day?

I know 14 is 2 × 7. I will divide by 2, and then divide by 7.



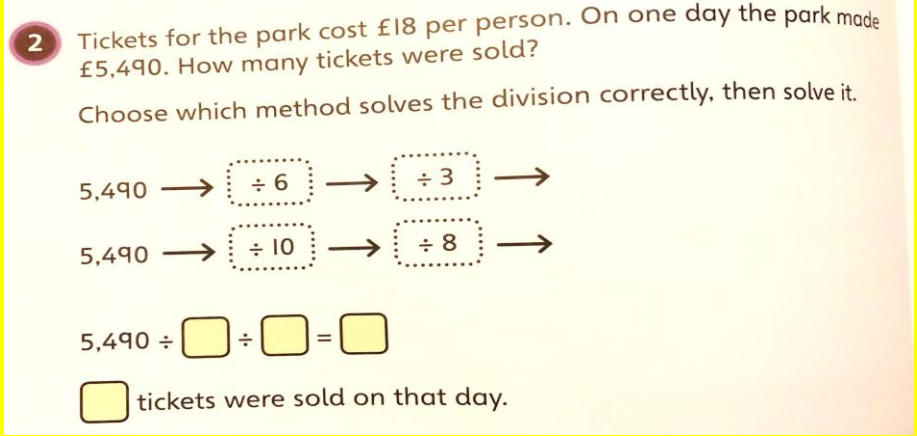
1,260

630
630

90	90	90	90	90	90	90
90	90	90	90	90	90	90

1260 ÷ 2 = 630 630 ÷ 7 = 90

90 people ride on the new rollercoaster per day.



2 Tickets for the park cost £18 per person. On one day the park made £5,490. How many tickets were sold?

Choose which method solves the division correctly, then solve it.

5,490 → ÷ 6 → ÷ 3 →

5,490 → ÷ 10 → ÷ 8 →

5,490 ÷ ☐ ÷ ☐ = ☐

☐ tickets were sold on that day.

5490 ÷ 6 ÷ 3 = 305

915	915	915	915	915	915

305	305	305

305 tickets were sold on that day.



DIVE DEEPER 1

3 a) Max is trying to solve 2,100 ÷ 12.

CHALLENGE



I will use the facts that 12 is 2 × 6, 6 × 2, 3 × 4 and 4 × 3.

I can see that 12 is also 3 × 2 × 2.



2,100 → ÷ 2 → ÷ 6 →

2,100 → ÷ 6 → ÷ 2 →

2,100 → ÷ 3 → ÷ 4 →

2,100 → ÷ 4 → ÷ 3 →

2,100 → ÷ 3 → ÷ 2 → ÷ 2 →

Max tries each of these calculations.

Do they all give the correct answer?

Which method makes it easiest to solve?

b) Reena is trying to solve 1,800 ÷ 24. Which factors could she choose?

1,800 → ÷ ? → ÷ ?

1,800 → ÷ ? → ÷ ? → ÷ ?

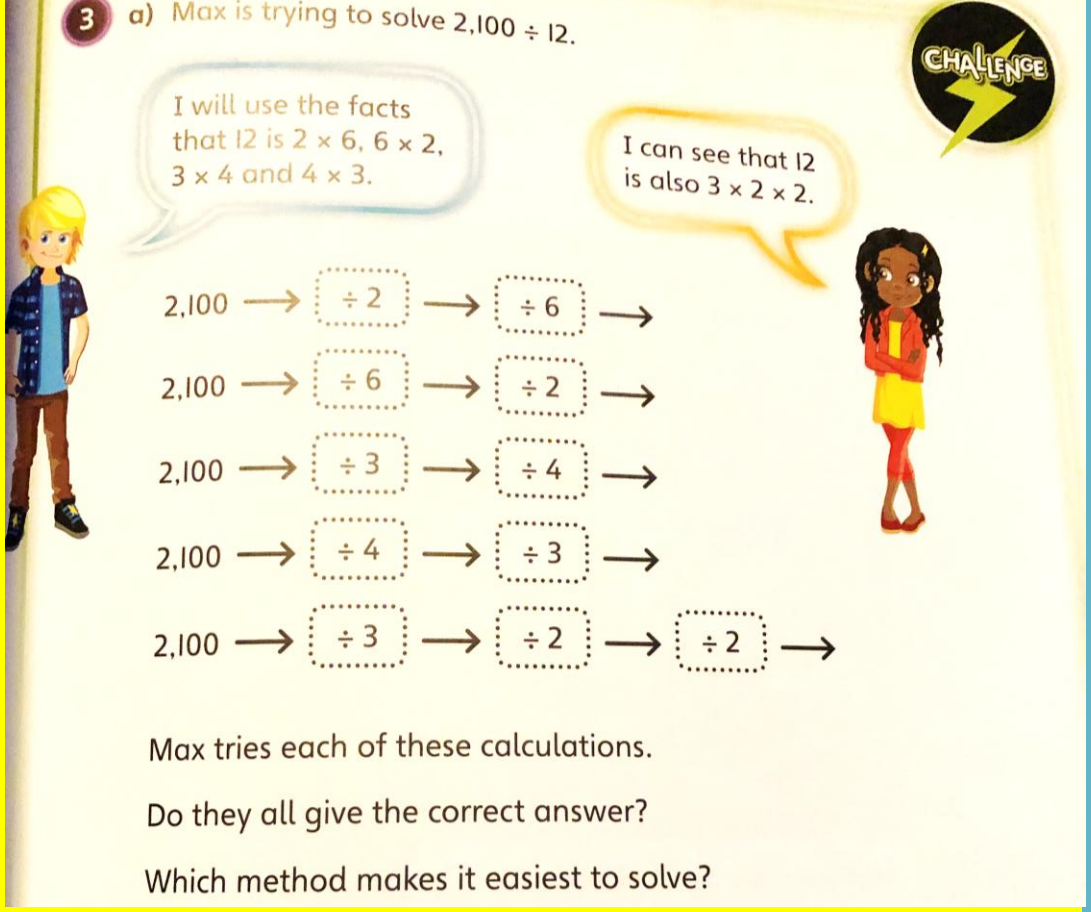
1,800 → ÷ ? → ÷ ? → ÷ ? → ÷ ?

1050			1050		
175	175	175	175	175	175

350	350	350	350	350	350
175			175		

700		700		700	
175	175	175	175		

525	525	525	525
175	175	175	



700	700	700

350	350

175	175

Ambika says 'If I double the number that I am dividing by, the answer to the division will be halved.'

Bella says 'I think that means that if I double both numbers in a division, the answer will be halved and then halved again.'

Do you agree with both Ambika and Bella? Show how you know.



DIVE DEEPER 2



Broken Calculator

'The 4, 5 and 6 keys on my calculator are broken!'

How can I use my calculator to work out:

1350 ÷ 15 =

624 ÷ 16 =

480 ÷ 16 = 30

AMBIKA

480 ÷ 32 = 15

BELLA

960 ÷ 32 = 30

Broken Calculator

'The 4, 5 and 6 keys on my calculator are broken!'

How can I use my calculator to work out:

1350 ÷ 15 =

624 ÷ 16 =

1350 ÷ 30 x 2 = 90

2700 ÷ 30 = 90

312 ÷ 8 = 39



Explain

For this task, ***do not*** *work out the answers to the questions.*

For each question, the answer has ***how many digits?***

576 ÷ 6

☐ *digit(s)*

5880 ÷ 7

☐ *digit(s)*

920 ÷ 8

☐ *digit(s)*

6140 ÷ 5

☐ *digit(s)*

2076 ÷ 3

☐ *digit(s)*

NOW…



APE

