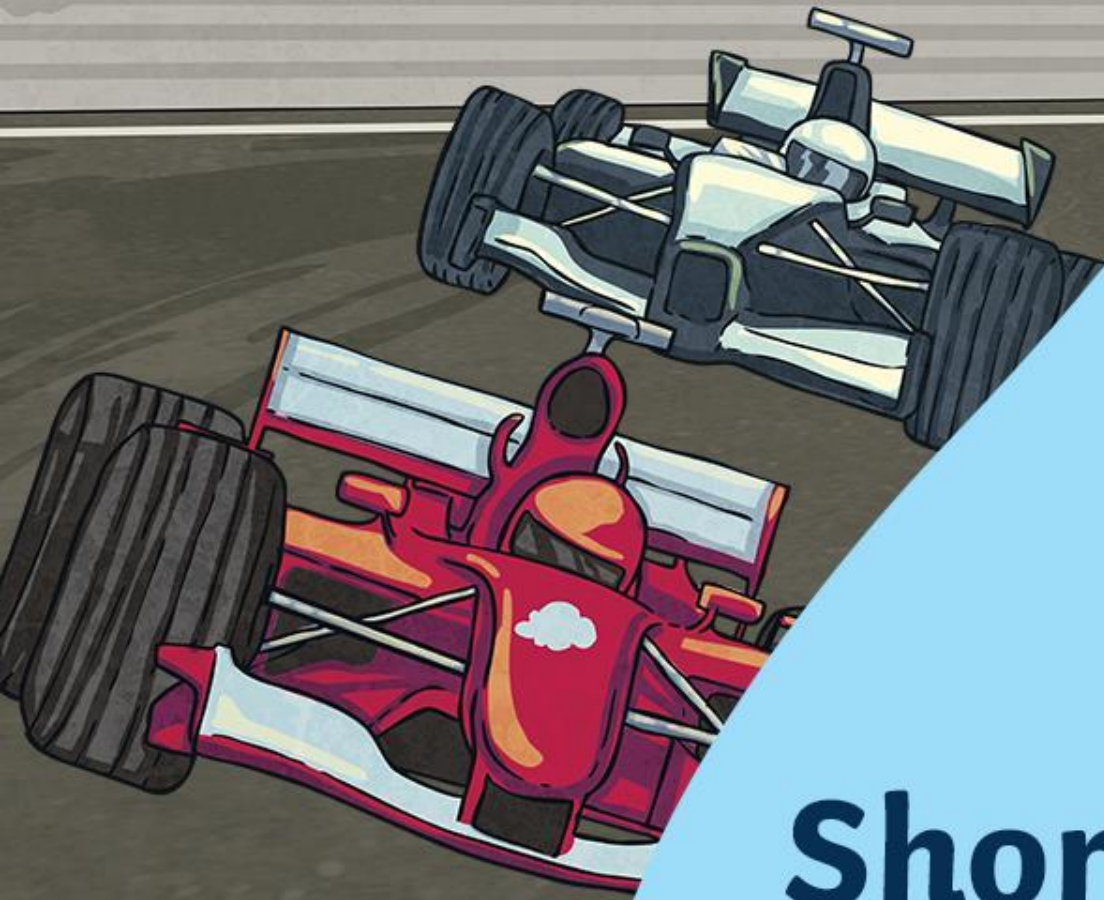


Diving into Mastery



Short Division

Diving into Mastery Guidance for Educators

Each activity sheet is split into three sections, diving, deeper and deepest, which are represented by the following icons:



Diving



Deeper



Deepest

These carefully designed activities take your children through a learning journey, initially ensuring they are fluent with the key concept being taught; then applying this to a range of reasoning and problem-solving activities.

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.

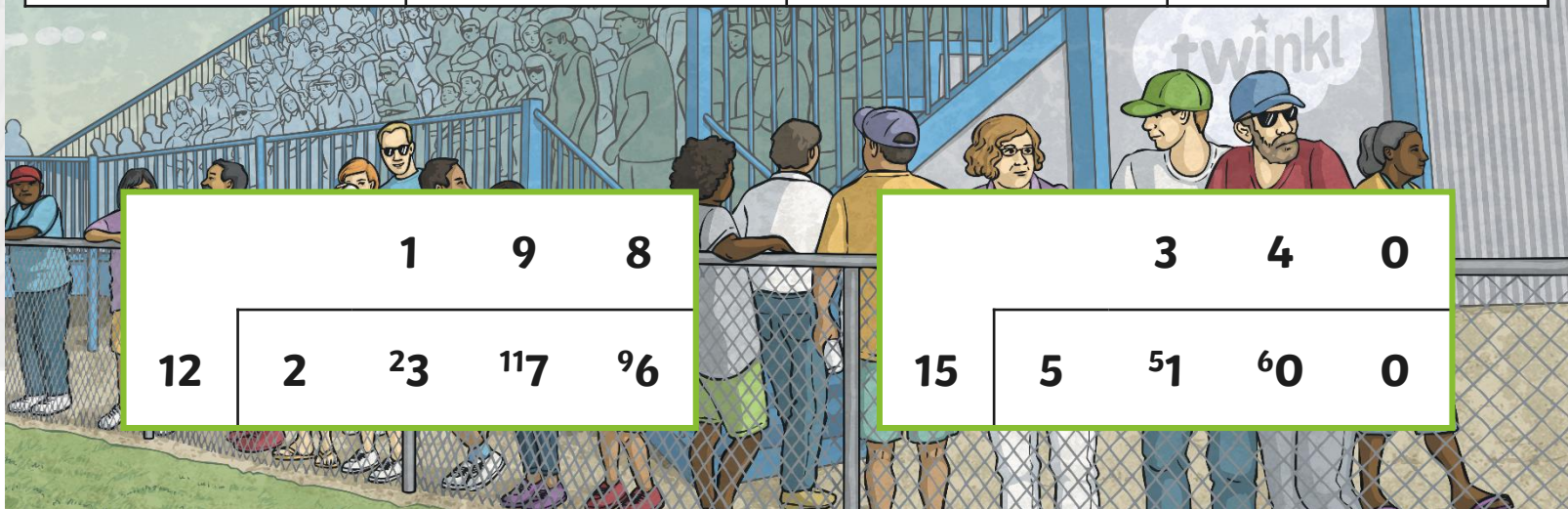
Aim

- Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context.



How many seats are in each row of each of the grandstands?

Grandstand	Total Number of Seats	Number of Rows	Number of Seats per Row
Spa Straight	2376	12	198
Bookets	5100	15	340



12

2

23

17

96

1

9

8

15

5

51

60

00

3

4

0

Short Division

Deeper



$$\begin{array}{r}
 7 \quad 8 \quad 0 \quad r10 \\
 30 \overline{) 3780} \\
 \underline{30} \\
 78 \\
 \underline{60} \\
 180 \\
 \underline{180} \\
 0
 \end{array}$$



Michael has driven 3780 laps of Toby's Tor Circuit. Each race is 30 laps long. Michael carries out the short division below to work out how many races he has completed.

Explain Michael's mistakes and work out the correct answer.

Michael has written the remainder in the answer space and has positioned the answers to be exchanged in each column. 37 (hundreds) divided by 30 gives one (hundred) and 7 (hundreds) to be exchanged and regrouped as 70 (tens).

$$\begin{array}{r}
 1 \quad 2 \quad 6 \\
 30 \overline{) 3780} \\
 \underline{30} \\
 78 \\
 \underline{60} \\
 180 \\
 \underline{180} \\
 0
 \end{array}$$

Short Division

Deepest



Organisers of a race have seat numbers and possible rows in the list below.

Can you find three ways of organising the seats into rows that will leave no remainders? Explain how you calculated your answer.

Number of Seats per Row	Number of Seats
12	3800 (multiple of 25)
15	1992 (multiple of 12)
25	1965 (multiple of 15)



$$\begin{array}{r}
 1 \quad 5 \quad 2 \\
 25 \overline{) 38120} \\
 \underline{30} \\
 80 \\
 \underline{75} \\
 50 \\
 \underline{50} \\
 0
 \end{array}$$

$$\begin{array}{r}
 1 \quad 3 \quad 1 \\
 15 \overline{) 1945} \\
 \underline{15} \\
 40 \\
 \underline{45} \\
 0
 \end{array}$$

$$\begin{array}{r}
 1 \quad 6 \quad 6 \\
 12 \overline{) 1966} \\
 \underline{12} \\
 70 \\
 \underline{72} \\
 0
 \end{array}$$


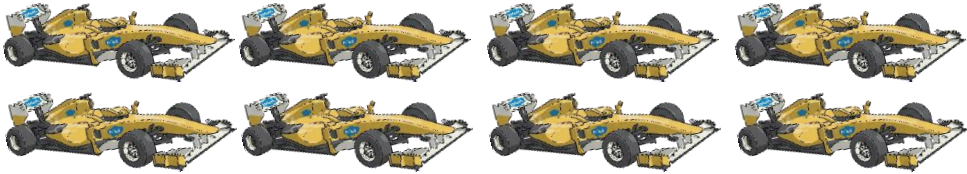



Short Division

Deepest



The images relate to one lap made by each vehicle.

Can you calculate the lap time for each vehicle using the information below?

	=	8568 seconds
	=	
	=	



= 952 seconds



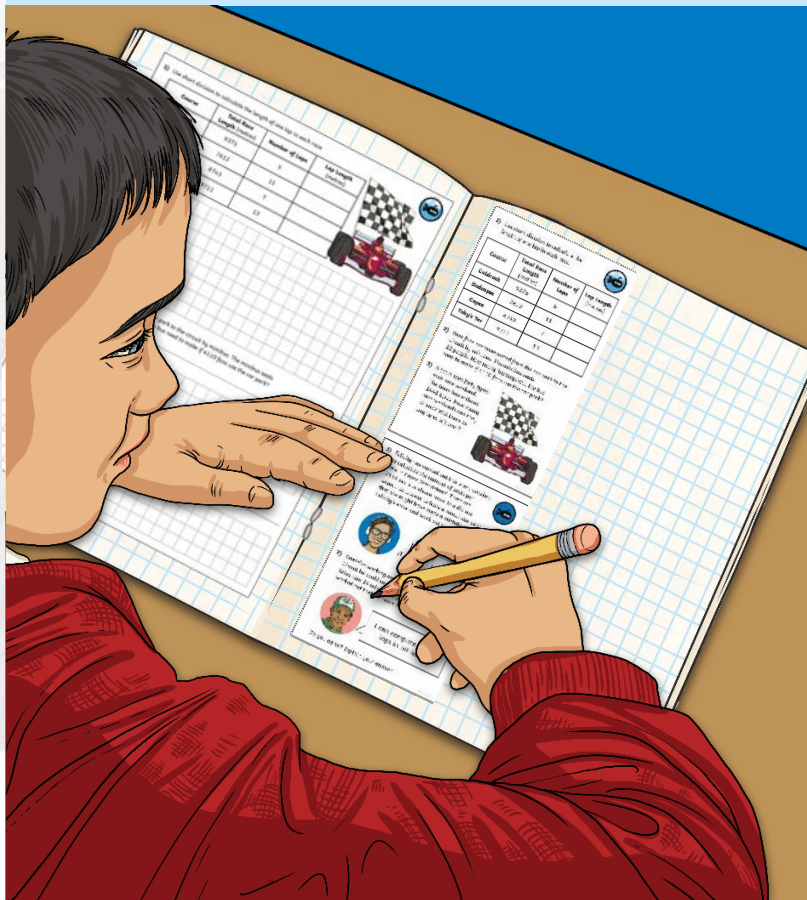
= 119 seconds



= 17 seconds

Short Division

Dive in by completing your own activity!



1) Organise seats. One of the race tracks has 1200 seats. There are 120 fans at each race. How many races can be held?

2) Daniel takes his family to the races. He has 1200 tickets. Each ticket costs £15. How much does he spend?

3) A team uses forty tyres each race weekend. The team has ordered 1648 tyres. How many race weekends can they attend? Will there be any tyres left over?

1) Use short division to calculate the length of one lap in each race.

Course	Total Race Length (metres)	Number of Laps	Lap Length (metres)
Goldrock	9375	5	
Badcopse	7612	11	
Cups	8743	7	
Toby's Tor	9711	13	

2) The information below is for the Goldrock race track. Use short division to find the length of one lap.

Course	Total Race Length (metres)	Number of Laps	Lap Length (metres)
Goldrock	9375	5	
Badcopse	7612	11	
Cups	8743	7	
Toby's Tor	9711	13	

3) A team uses forty tyres each race weekend. The team has ordered 1648 tyres. How many race weekends can they attend? Will there be any tyres left over?

Need Planning to Complement this Resource?

National Curriculum Aim

Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context.

Tackle Shop
I have 95 meal worms and want to equally share them between five tubs.
How many meal worms will there be in each tub?
Today, we will be learning about the written method, short division.

Gone Fishing

Biggest Fish
What fish weighs the most?
Click on the fish to reveal their weights.
 $338g \div 8 = 42g$
 $402g \div 9 = 44g$

Additional, Subtotal
Blank Sheet
Numbered
Engines Ready

Race Day
There are 2937 race programmes. The booklets are shared equally between 11 boxes. How many programmes are in each box?
Today, we will be learning about the written method, short division.

Engines Ready

Race Day Problems
Race Day 5 shirts are packed into boxes of 11. There are 5529 5-shirts. How many boxes are needed? Are there any 5-shirts remaining?

Additional, Subtotal
Short
Extra Challenge
Engines Ready Game

