

RECALL

$$\begin{array}{r} 199 \\ + 1901 \\ \hline \end{array}$$

$$\begin{array}{r} 199 \\ - 1901 \\ \hline \end{array}$$

$$\begin{array}{r} 10,199 \\ + 36,704 \\ \hline \end{array}$$

$$\begin{array}{r} 10,199 \\ - 36,704 \\ \hline \end{array}$$

Can we do these sums?

What mistake have I made?

Fix them and work out the answer.

L.O. MULTIPLY MULTI-DIGIT NUMBER UP TO 4 DIGITS BY A 1-DIGIT NUMBER USING THE FORMAL WRITTEN METHOD OF LONG MULTIPLICATION.

- **SOME WILL EVEN:** Check my answer using a different method.
- **SOME WILL:** Use column multiplication.
- **MOST WILL:** Use grid method for multiplication.
- **ALL WILL:** Draw an array / Use repeated addition to show a multiplication sum.



APE

3

MY TURN



a) Without calculating, how can you tell which total is more likely to be correct:

£160,250 or **£17,200**

b) How much will the trip actually cost for four people?

help

Could you use a number line / repeated addition?



How much would the trip be per person if it did cost £128,820 for four?

YOUR TURN



a) Without calculating, how can you tell which total is more likely to be correct:

£128,820 or £12,905

b) How much will the trip actually cost for four people?

help

Could you use a number line / repeated addition?



How much would the trip be per person if it did cost £128,820 for four?

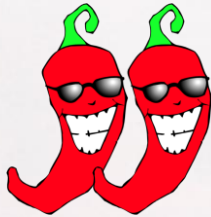


The holiday costs £2,345 per person with a different travel company.
What is the total cost for 4 people?

Th	H	T	O
1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000	100 100 100 100 100 100 100 100 100 100 100 100	10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

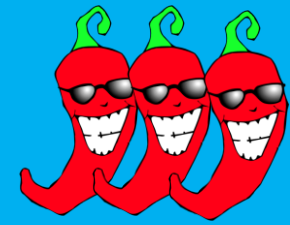
	Th	H	T	O
	2	3	4	5
	2	3	4	5
	2	3	4	5
+	2	3	4	5

	2,000	300	40	5	
4					×



Use all the different methods.
Which one do you prefer?

The total cost for 4 people is £ .



Another trip costs
£2,865 per person.
How much would
the cost be for five
people?

Use your preferred
method and check
with another
method.



How much would both trips cost for six people?
Can you find a quicker way to work out your
answer?

The holiday costs £2,345 per person with a different travel company.
What is the total cost for 4 people?

Th	H	T	O
1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000	100 100 100 100 100 100 100 100 100 100 100 100	10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10	1 1



9,380

	Th	H	T	O
	2	3	4	5
	2	3	4	5
	2	3	4	5
+	2	3	4	5
	9,380			

	2,000	300	40	5
4	8000	1200	160	20

	2	3	4	5
×				4
9,380				



Use all the different methods.
Which one do you prefer?

The total cost for 4 people is £ **9,380**



Another trip costs £2,865 per person. How much would the cost be for five people?

£14,325

Use your preferred method and check with another method.



How much would both trips cost for six people?
Can you find a quicker way to work out your answer?

$$£2,345 \times 6 = £14,070$$

$$£2,865 \times 6 = £17,190$$

DIVE DEEPER 1

1) All three boys are using place value cards to create multiplication sums.

a) Predict who will have the bigger total.

b) Calculate who has the biggest total.

 Davinder

7 1 3 6 2

 Gordon

4 2 6 3 8

 Tom

8 1 2 3 4

2)

Arrange the digits to create these multiplications.

10 $\begin{array}{r} \text{ } \text{ } \text{ } \text{ } \\ \times \text{ } \text{ } \text{ } \text{ } \\ \hline \end{array}$

6 2 7 2

11 $\begin{array}{r} \text{ } \text{ } \text{ } \text{ } \\ \times \text{ } \text{ } \text{ } \text{ } \\ \hline \end{array}$

1 0 2 8 4

12 $\begin{array}{r} \text{ } \text{ } \text{ } \text{ } \\ \times \text{ } \text{ } \text{ } \text{ } \\ \hline \end{array}$

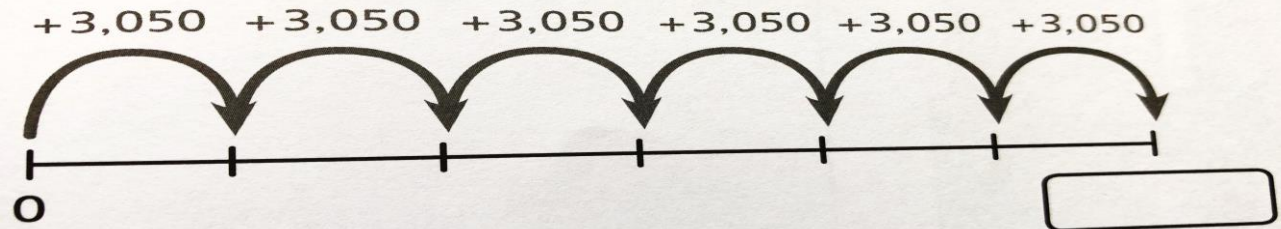
3 5 8 5 6

13 $\begin{array}{r} \text{ } \text{ } \text{ } \text{ } \\ \times \text{ } \text{ } \text{ } \text{ } \\ \hline \end{array}$

2 8 6 4 0

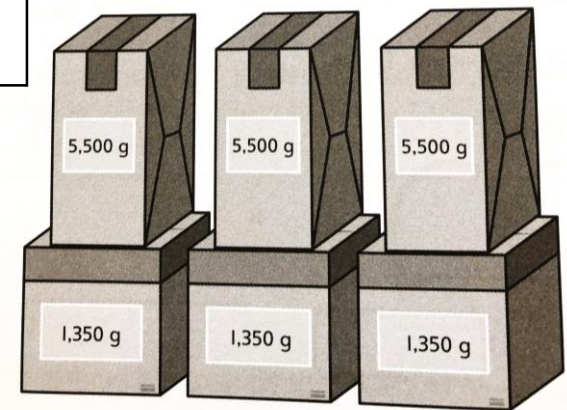
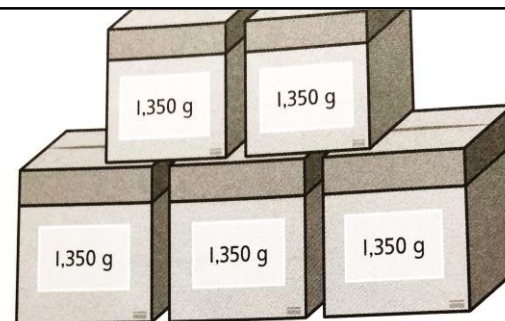
3)

Calculate the final number on the number line.



4)

Calculate the total weight of the boxes in each set.



DIVE DEEPER 1



1) All three boys are using place value cards to create multiplication sums.

a) Predict who will have the bigger total.

b) Calculate who has the biggest total.



2)

Arrange the digits to create these multiplications.

IO $\begin{array}{r} 1568 \\ \times \quad 4 \\ \hline 6272 \end{array}$

II $\begin{array}{r} 3428 \\ \times \quad 3 \\ \hline 10284 \end{array}$

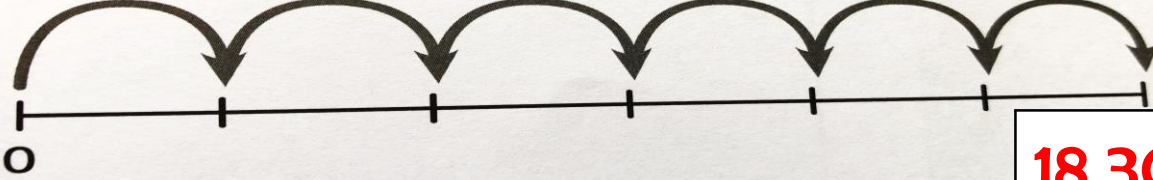
12 $\begin{array}{r} 5976 \\ \times \quad 6 \\ \hline 35856 \end{array}$

13 $\begin{array}{r} 5728 \\ \times \quad 5 \\ \hline 28640 \end{array}$

3)

Calculate the final number on the number line.

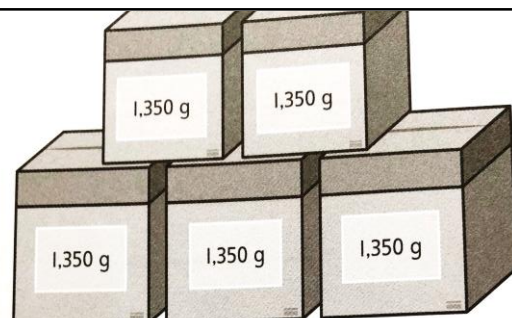
+3,050 +3,050 +3,050 +3,050 +3,050 +3,050



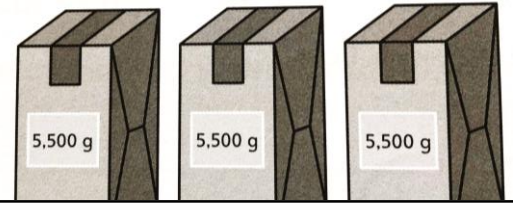
18,300

4)

Calculate the total weight of the boxes in each set.

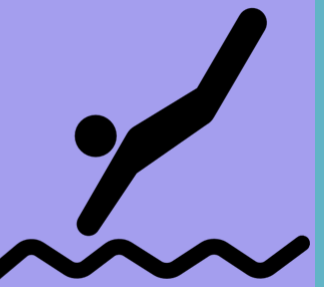


$1,350\text{g} \times 5 = 6,750\text{g}$



$5,500\text{g} \times 3 = 16,500\text{g}$
 $1,350\text{g} \times 3 = 4,050\text{g}$
 $16,500 + 4,050 = 20,550\text{g}$

DIVE DEEPER 2



5



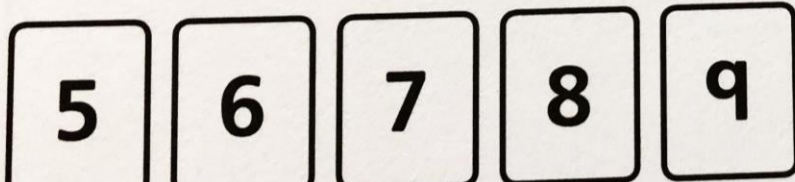
- a) Use each digit once to complete two multiplications.

What is the difference between the two answers?

$$\begin{array}{r} \square\square\square\square \\ \times \quad \square \\ \hline \end{array} \quad \begin{array}{r} \square\square\square\square \\ \times \quad \square \\ \hline \end{array}$$



- b) Max uses these cards to make a 4-digit number and a 1-digit number. He multiplies them together. What is the biggest number he can make? What is the smallest number he can make?



DIVE DEEPER 2



5



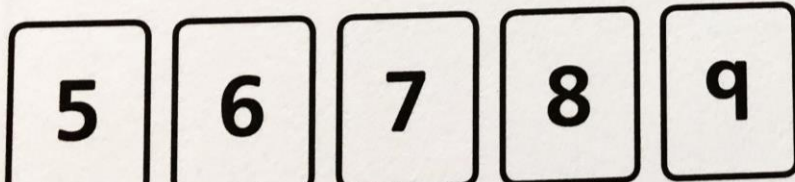
- a) Use each digit once to complete two multiplications.

What is the difference between the two answers?

□ □ □ □	×	□	×	□ □ □ □
_____		_____		_____
_____		_____		_____



- b) Max uses these cards to make a 4-digit number and a 1-digit number. He multiplies them together. What is the biggest number he can make? What is the smallest number he can make?



$$8765 \times 9 = 78,885$$

$$6789 \times 5 = 33,945$$

All the Digits

This represents the multiplication of a 4-figure number by 3.

$$\begin{array}{r} \text{★} \text{★} \text{★} \text{★} \\ \times \qquad \qquad \qquad 3 \\ \hline \text{★} \text{★} \text{★} \text{★} \text{★} \end{array}$$

The whole calculation uses each of the digits 0 – 9 once and once only.

The 4-figure number contains three consecutive numbers, which are not in order. The third digit is the sum of two of the consecutive numbers.

The first, third and fifth figures of the five-digit product are three consecutive numbers, again not in order. The second and fourth digits are also consecutive numbers.

Can you replace the stars in the calculation with figures?