

Spring Term 1.

Week 1.

Wednesday 6th January 2021.

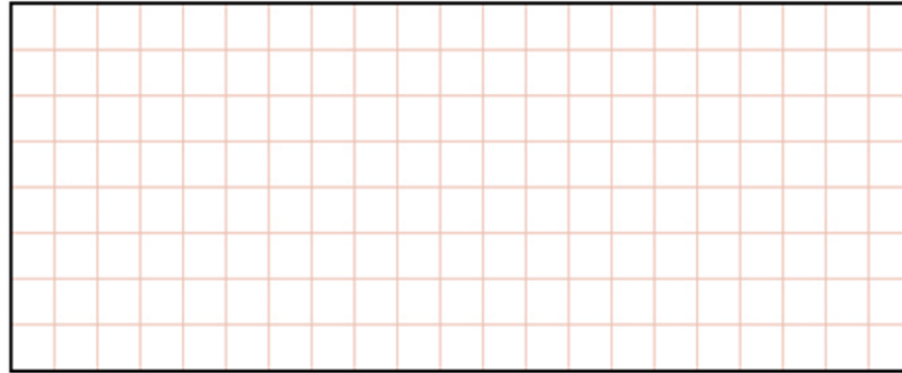
Week 1. Long multiplication.

Before you write the date,
answer the following:



Q1.

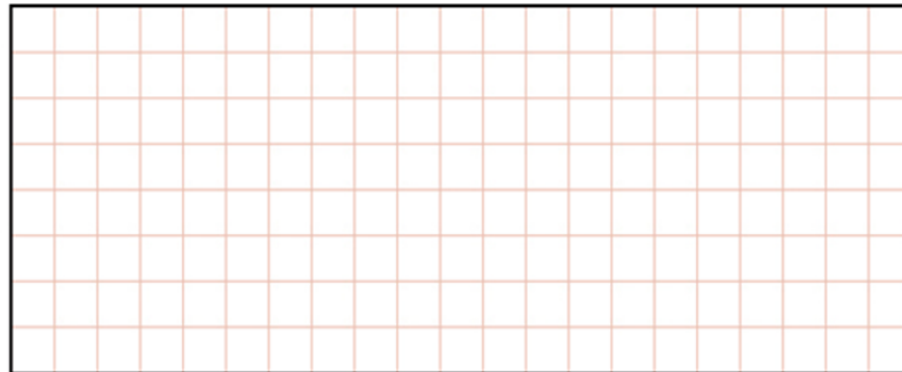
$$\frac{5}{8} \times 40 = \boxed{}$$



1 mark

Q2.

$$\frac{2}{5} \times 20 = \boxed{}$$



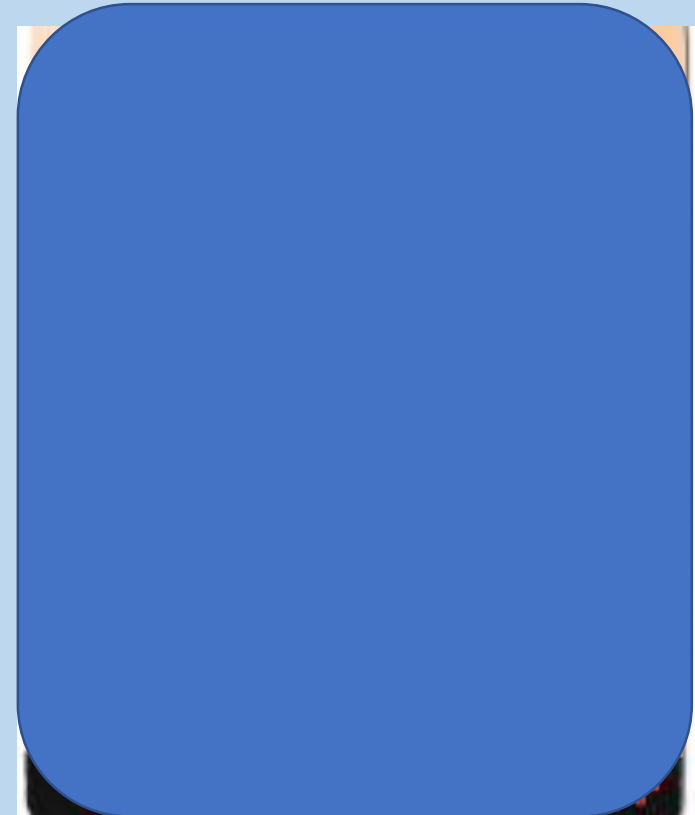
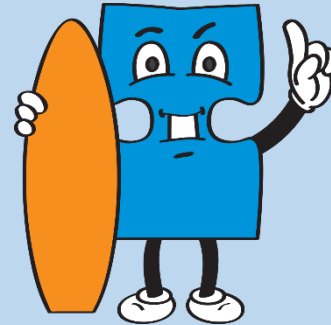
1 mark

LORIC task

FANCY DRESS

Three husband and wife couples have arranged to meet up at a fancy dress party. Anna and Edward were first to arrive, shortly before the couple dressed as a fairy and a French maid. 'I should have known you two blokes would turn up in drag,' laughs Fiona, when she eventually arrives with the caveman and joins the group. Chris suggests getting some drinks. The clown, French maid and nun go off to get them. Bob remains to talk to his sister, who is dressed as a pirate. They both help Debbie who is repairing her costume.

Can you match the spouses together, say which costume each person wears and say in which order they turned up?



Teach

You may have used the grid method or short multiplication for certain **multiplication** calculations. When **multiplying** three-digit and four-digit numbers by two-digits, it is much easier to use the **long multiplication method**.

	1	2		
	1	2	4	
x		2	6	
	7	4	4	
2,	4	8	0	
3,	2	2	4	
1	1			

Model

The first part of **long multiplication** is **multiplying** the ones digit from the two-digit number (4) by each of the digits in the four-digit number (1,836). E.g.

$$4 \times 6 = 24 \text{ (carrying the 2 over)}$$

$$4 \times 3 = 12$$

$$12 + 2 = 14 \text{ (carrying the 1 over)}$$

$$4 \times 8 = 32$$

$$32 + 1 = 33 \text{ (carrying the 3 over)}$$

$$4 \times 1 = 4. \text{ Then } 4 + 3 = 7.$$

	3	1	2	
	1,	8	3	6
x			2	4
	7,	3	4	4

Model

Now we **multiply** each of the digits in the four-digit number (1,836) by 2. Because it is actually **20**, and not 2, we put a **zero** in the first column. Then we complete the following calculations:

$$2 \times 6 = 12 \text{ (carrying the 1 over)}$$

$$2 \times 3 = 6. \text{ Then } 6 + 1 = 7$$

$$2 \times 8 = 16 \text{ (carrying the 1 over)}$$

$$2 \times 1 = 2. \text{ Then } 2 + 1 = 3.$$

1		1		
	1,	8	3	6
x			2	4
	7,	3	4	4
3	6,	7	2	0

Model

Finally, we **add** the products of both calculations together to get the final answer.

$$7,344 + 36,720 = 44,064$$

	1,	8	3	6
x			2	4
	7,	3	4	4
3	6,	7	2	0
	4	4,	0	6
			6	4
1	1			

Apply

Remember to use the following layout to complete your **long multiplication** calculations:

	1,	8	3	6
x			2	4
	7,	3	4	4
3	6,	7	2	0
4	4,	0	6	4
1	1			

Use the **long multiplication method** shown to work out the following:

- 1) $3,859 \times 28$
- 2) $1,483 \times 56$
- 3) $2,647 \times 73$

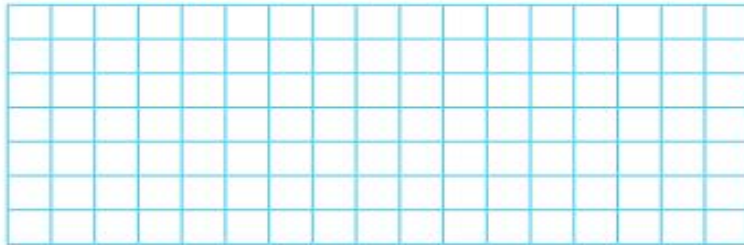
In your book...

- 5 A machine makes 2,734 boxes every hour.
The machine works for 3 hours each day.
a) How many boxes will it make in 12 days?

- b) Compare methods with a partner. Were there any other ways you could have worked out the answer?



- 6 Work out $378 \times 7 \times 12$
Show your method clearly.



7

1	2	3	4	5	6
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×

□	□	□	□
	□	□	

- a) Using all the digit cards, create 4 different calculations and work out the answer to each.

- b) Write your answers in ascending order.

- c) What is the smallest product that can be made?



- 8 Amir scores 4,680 points in a computer game for 12 games in a row.
Whitney scores 2,512 points every game for 24 games.



Who scores more points? _____

How many more?

Use RUCSAC to solve word problems:



Read



Read the question carefully



Underline



Underline the keywords and numbers



Choose



Choose the correct operation(s) and a mental or written method of calculation.



Solve



Solve it! Make sure you follow the steps.



Answer



Check that you've answered the question. What did you need to find out in the first place?



Check



Check your answer. Use another method or checking technique (was it close to your estimate?)



Read



Read the question carefully

There are 15 biscuits in a packet. A shop orders 156 packets. How many biscuits will be in the 156 packets?



Underline



Underline the keywords and numbers

There are 15 biscuits in a packet. A shop orders 156 packets. How many biscuits will be in the 156 packets?



Choose



Choose the correct operation(s) and a mental or written method of calculation.

There are 15 biscuits in a packet. A shop orders 156 packets. How many biscuits will be in the 156 packets?



Answer



Check that you've answered the question. What did you need to find out in the first place?

There are 15 biscuits in a packet. A shop orders 156 packets. How many biscuits will be in the 156 packets?



Check



Check your answer. Use another method or checking technique (was it close to your estimate?)

There are 15 biscuits in a packet. A shop orders 156 packets. How many biscuits will be in the 156 packets?

Multiplication Word Problems

Use **RUCSAC** to solve word problems:



Read



Read the question carefully



Underline



Underline the keywords and numbers



Choose



Choose the correct operation(s) and a mental or written method of calculation.



Solve



Solve it! Make sure you follow the steps.



Answer



Check that you've answered the question. What did you need to find out in the first place?



Check



Check your answer. Use another method or checking technique (was it close to your estimate?)

In your books: Use RUCSAC to answer the multiplication word problems in your book!

Use a formal method to calculate the answers to these questions.

1. There are 17 biscuits in a packet and 3 packets in a box. A supermarket orders 15 379 boxes. How many biscuits will be in the 15 379 boxes?
2. A factory makes nine crates of 38628 pencils on each of the five working days of the week. How many pencils are made each week?
3. A wholesaler sells mangoes for 84p each. The wholesaler sells 13 330 mangoes in one week. How much money will the wholesaler receive for the mangoes?
4. It takes one hour less than 2 days for a satellite to go around the Earth. How many hours will it take for the satellite to go around the Earth 23 988 times? Calculate how many days and how many weeks this will be. Estimate the number of years this will be to the nearest year.
5. A machine makes 60 802 bottle tops in a week. In a 52-week working year, how many bottle tops are made in a year?
6. A cinema has an average weekly attendance of 24 356 people. The average ticket sales are £5 per ticket. What is the total income in a 13-week quarterly period?
7. Bags of potatoes contains an average of 33 potatoes. In a year, a farmer sells 58 716 bags. How many potatoes does she sell in one year?
8. A factory makes 63 957 nails each day. How many nails are made in January and February 2017, when the factory is open every day?
9. There are 22 children on a school visit to France. Each child pays £333.18 for the school visit. How much do they pay altogether?
10. A football club has an average attendance of 37 834 people to each match. What is the total attendance for the 28 matches played in a season?

Answers:

Word Problems Answers

Use a formal method to calculate the answers to these questions.

1. There are 15 biscuits in a packet. A shop orders 156 packets. How many biscuits will be in the 156 packets? **2340**
2. A school buys 172 boxes of pencils. Each box has 12 pencils. How many pencils has the school bought? **2064**
3. A wholesaler sells apples for 17p each. A grocer buys 197 apples. How much will they cost? **3349 £33.49**
4. It takes 18 minutes to make a toy car. How many minutes will it take to make 205 cars? **3690**
5. A machine makes 16 dice in a minute. A working day is 264 minutes. How many dice are made in 264 minutes? **4224**
6. A cinema has 21 screens. Each screen has 297 seats. How many seats are there in the cinema? **6237**
7. Eggs are sold in trays of 24. In a week, a farmer sells 372 trays. How many eggs does he sell in one week? **8928**
8. A bag of nails contains 613 nails. A hardware store has 23 bags. How many nails are in the 23 bags? **14 099**
9. There are 27 children in a class. Each child pays £7.49 for a school trip. How much do they pay altogether? **20 223 £202.23**
10. A football club has an average attendance of 859 people to each match. What is the total attendance for the 29 matches played in a season? **24 911**

The End!

Did you finish all the questions?

Did you finish and get them all correct?

How many problem-solving questions did you get correct?

What mistakes did you make in the ones that are incorrect?