

Have a go at these arithmetic calculations.

1. $9 + 3 \times 7 =$

2. = $1098 - 100$

3. $11 \times 4\frac{1}{2} =$

4. $9352 \div 5 =$

Complete as many of these as you can in 3 minutes:

1 $399 - 199 =$

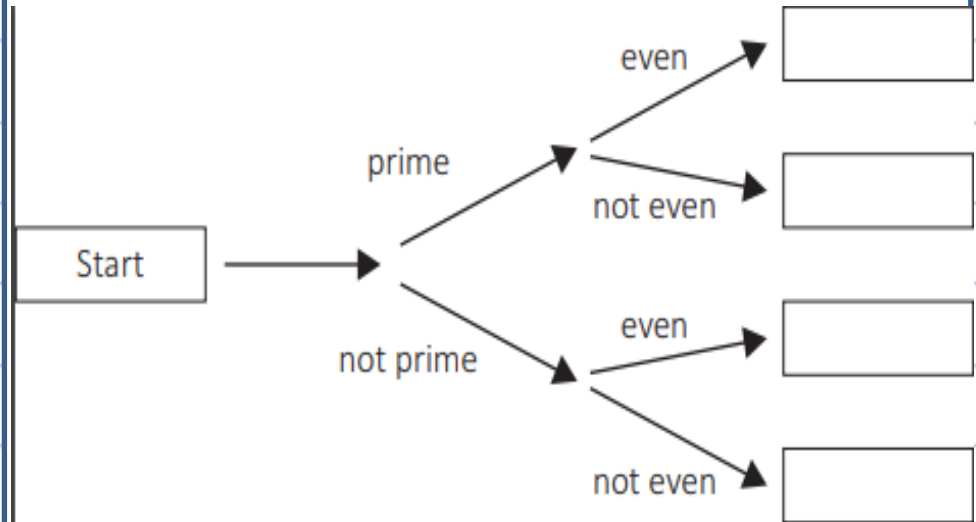
1 mark


2 $9,675 \div 15 =$

1 mark

3. Place each number below in the correct box in the diagram,

11	24	2	33
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Lesson 11

Learning Question:

Can I apply what I have learnt to solve calculations?

Success Criteria:

- Write out calculation
- Choose strategy to solve calculation
- Use techniques learnt to work out calculation
- Use inverse to check answer

Vocabulary

Multiplication

Multiply

Times

Strategy

Column

Calculate

Place value

Squared

BODMAS

Number sentence

Sign

Operation

Symbol



Personal Target: What are you going to focus on today?

We are going to do a little bit of practise with multiplying and revising the strategies we can use to solve multiplication calculations.

Have a go at the questions on the following pages. Check the clue to help you choose the correct strategy.

The strategy and answer for each question will appear on the next page to the question.

Clue: You will need to set this question out using the column method.

$$319 \times 3 =$$

1 mark

319 x 3

	H	T	O
		2	
	3	1	9
X			<u>3</u>
	<u>9</u>	<u>5</u>	<u>7</u>

- Ensure digits are positioned correctly.
- Start by multiplying 9 by 3 = 27
- Put the 7 in the ones column of the answer (27 has 7 ones)
- Put the 2 above the tens column (27 has two 10s)
- Next multiply 1 by 3 = 3 (this can also be read as 10 x 3 as the 1 is in the 10s column).
- Add in the 2 that has been carried: 3 + 2 = 5 (or 30 + 20 = 50). Place the 5 in the tens column of the answer.
- Finally, multiply 3 x 3 = 9 (this can also be read as 300 x 3 as the first 3 is in the 100s column).
- Place the 9 in the hundreds column of the answer.

Clue: Calculate using the column method.

$$85 \times 7 =$$

1 mark

85 x 7

$$\begin{array}{r} \text{T} \quad \text{O} \\ 3 \\ 85 \\ \times \quad 7 \\ \hline 595 \end{array}$$

- Ensure digits are positioned correctly.
- Start by multiplying 5 by 7 = 35
- Put the 5 in the ones column of the answer (35 has 5 ones)
- Put the 3 above the tens column (35 has three 10s)
- Next multiply 8 by 7 = 56 (this can also be read as 80 x 7 = 560 as the 8 is in the 10s column).
- Add in the 3 that has been carried: 56 + 3 = 59. Place the 9 in the tens column of the answer.
- Place the 5 in the hundreds column of the answer (560 + 30 = 590).

Clue: One step at a time. Calculate 3×6 and then multiply the answer by 2.

$$3 \times 6 \times 2 =$$

1 mark

$$3 \times 6 \times 2$$

One step at a time. Calculate 3×6 and then multiply the answer by 2.

Remember BODMAS - if there are no brackets or orders, then simply read left to right, doing multiplication or division before addition and subtraction.

$$3 \times 6 = 12 \quad \text{and then} \quad 12 \times 2 = 24$$

Clue: Place value! When we multiply numbers by 10 they move one place to the left. Your decimal point stays where it is!



$$6.33 \times 10 =$$

1 mark

6.33 x 10

When we multiply numbers by 10 they move one place to the left. Your decimal point stays where it is!

Place value grid

Tens	Ones	DP	Tenths	Hundredths
	6	.	3	
6	3	.	3	3

$$6.33 \times 10 = 63.3$$

Clue: Whenever you see this sign: 2 it means squared (multiply by itself). This calculation is really 8×8 .

$$8^2 =$$

1 mark

$$8^2$$

Whenever you see this sign: 2 it means squared (multiply by itself). This calculation is really 8×8 .

$$8 \times 8 = 64$$

Clue: Don't let the hundreds scare you! This is really 4×3 , only 10,000 times bigger!

$$400 \times 300 =$$

1 mark

$$400 \times 300$$

- Ignore the zeros
- $4 \times 3 = 12$
- Then add the zeros in: four zeros in the question, so the answer is 120000

Clue: The column method is already set out for you here – don't forget to write a '0' when you are multiplying by the '6' – it means 60!

$$\begin{array}{r}
 \\
 81 \\
 \times 63 \\
 \hline

 \end{array}$$

2 marks

81 x 63

	T	H	T	O
		8	1	
X		<u>6</u>	<u>3</u>	
		¹ 2	4	3
	¹			
+	<u>4</u>	<u>8</u>	<u>6</u>	<u>0</u>
	5	1	0	3

- Ensure digits are positioned correctly.
- Start by multiplying 1 by 3 = 3
- Put the 3 in the ones column of the answer.
- Next multiply 8 by 3 = 24 (this can also be read as 80 x 3 = 240 as the 8 is in the 10s column).
- Place the 4 in the tens column of the answer (240 has 4 tens) and carry the 2 into the hundreds column (240 has 2 hundreds).
- Now multiply by the tens column: 1 x 6 = 6, but because you are actually multiplying 1 x 60, you need to put a zero in the ones column. Put the 6 in the tens column (6 tens in 60).
- Then multiply 8 x 6 = 48 and put the 8 in the hundreds column and the 4 in the thousands column (as you are actually multiplying 80 x 60 which would total 4800).
- Add these two totals together.

Clue: Multiply the numerators followed by the denominators and then simplify!

$$\frac{2}{3} \times \frac{4}{8} =$$

1 mark

$$\frac{2}{3} \times \frac{4}{8}$$

- Multiply the numerators: $2 \times 4 = 8$
- Then multiply the denominators: $3 \times 8 = 24$
- This will give you an answer of $\frac{8}{24}$
- Then simplify: $8 \div 8 = 1$ and $24 \div 8 = 3$, so the simplified fraction is $\frac{1}{3}$

Clue: Write 16 as $\frac{16}{1}$ and convert the mixed number into an improper fraction, then multiply.

$$16 \times 2\frac{1}{4} =$$

1 mark

16 x 2¼

Write 16 as $\frac{16}{1}$ and convert the mixed number into an improper fraction, then multiply:

$$\frac{16}{1} \times \frac{9}{4}$$

- Multiply the numerators: $16 \times 9 = 144$
- Then multiply the denominators: $1 \times 4 = 4$
- This will give you an answer of $\frac{144}{4}$
- Then convert back to a mixed number: $144 \div 4 = 36$

Clue: Remember BODMAS! Calculate 8×2 first, then take the answer away from 30.

$$30 - 8 \times 2 =$$

1 mark

$$30 - 8 \times 2$$

Remember BODMAS! Calculate 8×2 first, then take the answer away from 30.

$$8 \times 2 = 16$$

$$30 - 16 = 14$$

Clue: When multiplying decimals, ignore the decimal point until you have your answer; then ensure your answer has the same amount of digits after the decimal point as appeared in the question.

$$6.37 \times 7$$

1 mark

6.37 x 7

Th H T O

2 4

6 3 7

X 7

4 4 5 9

Answer:

44.59

- Ignore the decimal point and position digits correctly.
- Start by multiplying 7 by 7 = 49
- Put the 9 in the ones column of the answer (49 has 9 ones)
- Put the 2 above the tens column (49 has four 10s)
- Next multiply 3 by 7 = 21 (this can also be read as 30 x 7 as the 3 is in the 10s column).
- Add in the 4 that has been carried: 21 + 4 = 25 (or 210 + 40 = 250). Place the 5 in the tens column of the answer.
- Put the 2 above the hundreds column (250 has two 100s)
- Finally, multiply 6 x 7 = 42 (this can also be read as 600 x 7 as the 6 is in the 100s column) and add in the carried 2 = 44.
- Place the second 4 of 44 in the hundreds column of the answer (4400 has 4 hundreds) and place the first 4 in the thousands column.
- Now refer back to the question – there are 2 digits after the decimal point; so you need to have 2 digits after the decimal point in your answer: 44.59

Your task:

Complete the questions on the
worksheet.

Plenary:

Create 5 multiplication questions (with answers) and send them to your teacher so they can include them in future tests!

Rosen: rosen-2061@ivervillage-jun.bucks.sch.uk

Rowling: rowling-2061@ivervillage-jun.bucks.sch.uk