Home Learning: Maths – Day 1 (Multiplication)

Video Link: https://vimeo.com/458926418

YR6 PROGRESSION IN MASTERY LESSON PACK - MULTIPLY UP TO 4-DIGITS BY 2-DIGITS

FLUENCY 1

Complete the stem sentences then calculate.

When we use long multiplication, we always start by multiplying by the _____ then move to by multiplying the _____.

When we multiply by the _____ number, we use _____ as a place holder.

We may still need to _____.

The final step is to find the _____.

		3	6	4	7
×				2	5

		9	6	3
×			4	7

FLUENCY 2

Ranjit's journey to school is 1,345m.

He walks to school every week day?

How far does he walk in 5 weeks?

FLUENCY 3

A school buys 14 boxes of tennis balls. There are 125 tennis balls in each box. How many tennis balls are there altogether?

Premium

FLUENCY TASKS

Children are expected to complete 1 or 2 of these slides… The difficulty gets harder as you move through the slides so if you are unsure, begin on the fluency section.

Home Learning: Maths – Day 1 (Multiplication)

REASONING TASKS

REASONING 1

Caleb is multiplying using long multiplication.

```
      3   1   2
  x       4   2
  ─────────────
      6   2   4
  1   2   4   8
  ─────────────
  8   8   7   2
```

Can you explain his error and correct it?

REASONING 2

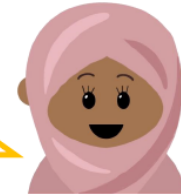**Convince Me!**

If 1,234 × 20 = 24,680 then
1,234 × 21 = 24,680 + 1,234

REASONING 3

Always, Sometimes or Never True?

Long multiplication is the most efficient way of multiplying a 2-digit number by a 4-digit number.

Explain your reasoning.

REASONING 4

Fill in the missing digits.

```
      3   9   4
  x       2   ★
  ─────────────
  1   9   7   ★
★     8   8   0
  ─────────────
  9   8   5   0
```

```
      2   2   ★
  x       ★   6
  ─────────────
  ★   3   6   2
  2   2   ★   0
  ─────────────
  3   ★   3   2
```
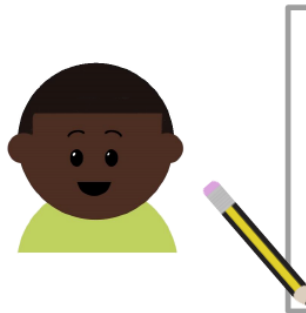
YR6 PROGRESSION IN MASTERY LESSON PACK - MULTIPLY UP TO A 4-DIGIT BY 2-DIGIT

PROBLEM SOLVING TASKS

PROBLEM SOLVING 1

Use the digit cards below to create two 4-digit by 2-digit multiplication calculations which give an answer greater than 500,000.

2	3	5
6	7	8
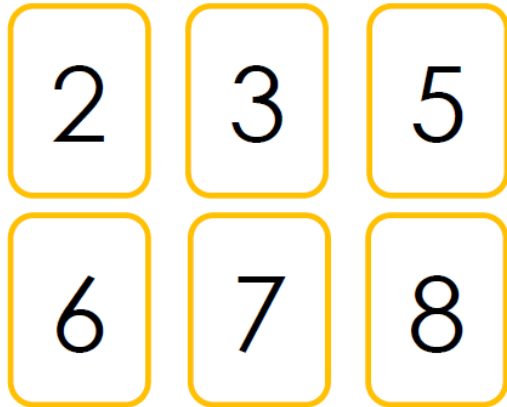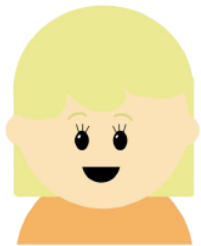
Find all possibilities.

PROBLEM SOLVING 2

All of the missing digits in the calculation below are 2, 4, 6 or 8.

Help Asha calculate the missing digits.

Answers coming up…

The next slide will contain the answers – make sure you have finished before you check the next slide. Please feel free to email any questions, queries or examples of work to your class teacher.

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Fluency 1

When we use long multiplication, we always start by multiplying by the **ones** then move to by multiplying the **tens**.

When we multiply by the **tens** number, we use **zero** as a place holder.

We may still need to **exchange**.

The final step is to find the **total**.

3,647 x 25 = 91,175   963 X 47 = 45,261

Fluency 2

1,345m x 25 = 33,625m (Ranjit only walks 5 days out of 7)

Fluency 3

There are 1,750 tennis balls all together.

Reasoning 4

	3	9	4
x		2	5
1	9	7	0
7	8	8	0
9	8	5	0

	2	2	7
x		1	6
1	3	6	2
2	2	7	0
3	6	3	2

Reasoning 1

Pupils spot that Caleb has not used zero as a place holder when multiplying by 40

Modelled DAB Reasoning Responses

D – Caleb has made an error

A – Caleb has not used zero as a place holder when multiplying by 40

B – Caleb has multiplied accurately by 2 but the number he is multiplying by is 42 therefore in the 2nd row he should multiply his numbers by 40. The answer should be 10 x bigger

Reasoning 2

Pupil responses should why the statement is correct.

Modelled DAB Reasoning Response

D – The statement is correct.

A – 1,234 x 21 is the same as 1,234 x 20 + 1,234.

B – 21 is one more than 20 so all that is needed is one more lot of 1,234

Reasoning 3

Pupil responses should show that Asha's statement is sometimes true.

Modelled DAB Reasoning Response

D – It is sometimes true.

A – Long multiplication can be the most efficient way of multiplying 2 digits by 4 digits but it depends on the numbers involved.

B – For example, 1,100 x 15 can be calculated mentally (1,100 x 10 + 1,100 x 5) whereas for 3,573 x 76, it would be more efficient to use a written method.

Home Learning: Maths – Day 2 (Known Facts)
Video Link: https://vimeo.com/466189554

FLUENCY 1

Complete the stem sentences.

> _____ is the inverse of _____.
>
> _____ is the inverse of _____.

Now, use the inverse to complete these calculations.

706 - 125 = 581	15 x 35 = 525	153 ÷ 9 = 17
581 + ___ = 706	525 ÷ 15 = ___	17 x ___ = 153

FLUENCY 2

Complete these calculations.

> 104 ÷ 4 = 26   104 ÷ ___ = 13
>
> 1,040 ÷ ___ = 26   1,040 ÷ 80 =

> 26 x 6 = 156   26 x 3 = ___
>
> 2.6 x 6 = ___   260 x ___ = 1,560

FLUENCY 3

Use this fact - 45 x 7 = 315- to work out:

45 x 8 =	45 x 6 =
315 ÷ 14 =	315 ÷ 3.5 =
22.5 x 7 =	22.5 x 14 =
450 x 3.5 =	450 x 0.7 =

FLUENCY 4

Ranjit worked out the solution to 5,600 ÷ 8 by using a known fact.

???
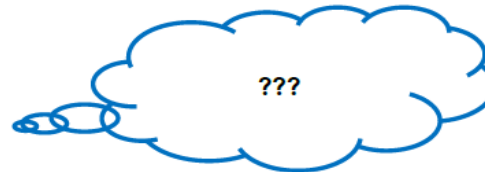
Give 4 facts he could have used.

FLUENCY TASKS

Children are expected to complete 1 or 2 of these slides... The difficulty gets harder as you move through the slides so if you are unsure, begin on the fluency section.

Home Learning: Maths – Day 2 (Known Facts)

REASONING 1

Spot Millie's mistake.

> If I know $144 \div 36 = 4$, then $144 \div 18$ must equal 2 because 18 is half of 36!

REASONING 2

True or False?

$$2 \times 67 \times 5 = 67 \times 10$$

Explain how you know.

REASONING 3

Convince Me

> I can use the calculation $6 \times 7 = 42$ to work out the answers to these calculations.

| 0.6×0.7 | 0.007×6 | 42×0.7 |

REASONING 4

Which of these calculations is the Odd One Out?

| $67 \times 8 =$ | $670 \div 8 =$ | $0.8 \times 6.7 =$ |

REASONING TASKS

Home Learning: Maths – Day 2 (Known Facts)

PROBLEM SOLVING 1

Write as many facts as you can using the digit cards only once in each calculation.

0 9 6 2 1 8

÷ ✕ − +

PROBLEM SOLVING 2

If the answer is ....

564

What could the question be?

?

Find at least 8 facts.

PROBLEM SOLVING TASKS

Try to aim for around 10 calculations for Problem Solving 2.