

WA4MNAMU1

Calculating with number

Core + Challenge

Mental Multiplication by 10s

I can multiply a 2-digit number by a multiple of 10 mentally.

Name: _____ Date: _____ Score: / 53

Key idea

Multiplying by multiples of 10: to multiply by a multiple of 10 (like 30), first multiply by the single digit, then multiply that answer by 10 (write an extra zero on the end).

E.g. 23×30 : $23 \times 3 = 69$, then $\times 10 \rightarrow 690$.

A Fluency *practise the skill*

/16 marks

Use a mental strategy (multiply by the digit, then by 10) to find each answer.

1. 23×30 _____

2. 14×20 _____

3. 35×10 _____

4. 12×40 _____

5. 26×30 _____

6. 18×50 _____

7. 15×70 _____

8. 24×40 _____

9. 19×30 _____

10. 27×20 _____

11. 13×70 _____

12. 16×40 _____

13. 21×60 _____

14. 32×40 _____

15. 17×30 _____

16. 29×10 _____

B Core *apply the skill to problems*

/21 marks

1

A school orders 40 boxes of pencils, each box containing 23 pencils. How many pencils are there in total?

[3 marks]

Answer: _____

2

A stadium has 30 rows of seats with 48 seats in each row. (a) How many seats does the stadium have in total? (b) If 1,200 tickets have already been sold, how many seats remain unsold?

[4 marks]

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Answer: _____

3

A factory packs 60 boxes of bottles, with 17 bottles in each box. How many bottles are packed in total?

[3 marks]

Answer: _____

4

A bus company runs 50 buses, each carrying 34 passengers at full capacity. (a) How many passengers can all the buses carry in total? (b) If 1,500 passengers travel in one day, how many empty seats remain across all the buses (assuming full capacity)?

[4 marks]

Answer: _____

5

A warehouse has 70 pallets, each holding 26 boxes. How many boxes are there in total?

[3 marks]

Answer: _____

6

A conference centre has 40 rows of chairs, with 32 chairs in each row. (a) How many chairs are there in total? (b) If 250 chairs are removed to make space for a stage, how many chairs remain?

[4 marks]

Answer: _____

C**Reasoning** *explain, justify and check***/9 marks**

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1

Explain why multiplying a whole number by 10 can be done by writing an extra zero on the end.

[2 marks]

2

A student works out 23×30 by first finding $23 \times 3 = 69$, then writing a zero on the end to get 690. Explain why this method works.

[2 marks]

3

Explain why multiplying by 20 is not the same as multiplying by 2 and then writing two zeros on the end.

[2 marks]

4

A student says that multiplying any whole number by a multiple of 10 will always give an answer ending in zero. Is this true? Explain.

[3 marks]

D

Challenge *multi-step and problem-solving*

/7 marks

1

A number multiplied by 30 gives 600. What is the number?

[2 marks]

Answer: _____

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2

Two multiples of 10 multiply together to give 1,200. Find two different pairs of multiples of 10 that work.

[2 marks]

Answer: _____

3

A number multiplied by 20 gives the same answer as that number multiplied by 15, plus 100. What is the number?

[3 marks]

Answer: _____

How did I go?

Fluency ___/16 Core ___/21 Reasoning ___/9 Challenge ___/7 **Total ___/53**

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