




MONDAY

LO: Multiply two-digit and three-digit numbers by a one digit number using formal written layout.

Recap – Multiply 3 numbers


Complete the calculations.

| | | |
|--|----------------------------------|--|
|  | $2 \times 4 = \underline{\quad}$ | $3 \times 2 \times 4 = 3 \times 8 = \underline{\quad}$ |
|  | $2 \times 4 = \underline{\quad}$ | |
|  | $2 \times 4 = \underline{\quad}$ | |

Answer

Recap – Multiply 3 numbers

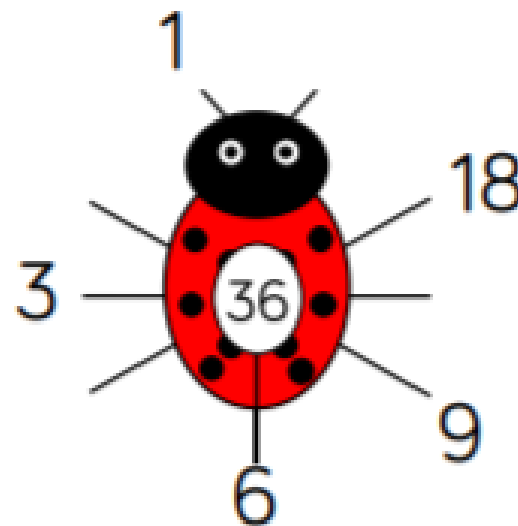
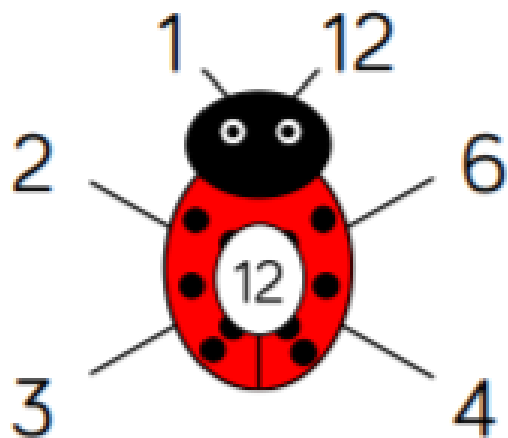
Complete the calculations.


$$\left. \begin{array}{l} 2 \times 4 = \underline{8} \\ 2 \times 4 = \underline{8} \\ 2 \times 4 = \underline{8} \end{array} \right\} 3 \times 2 \times 4 = 3 \times 8 = \underline{24}$$

Recap – Factor pairs

Here is an example of a factor bug for 12

Complete the factor bug for 36

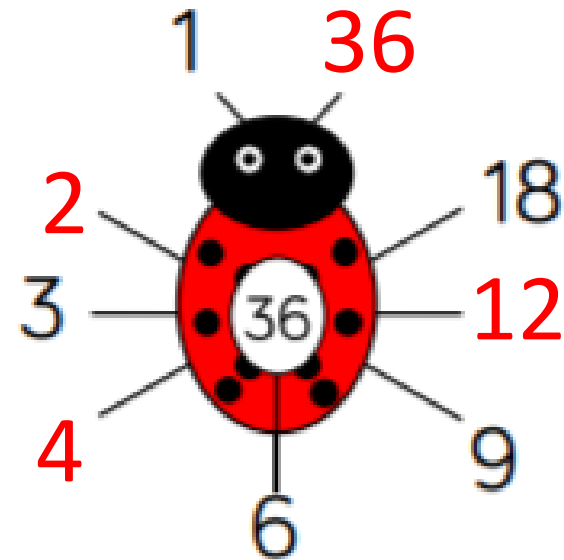
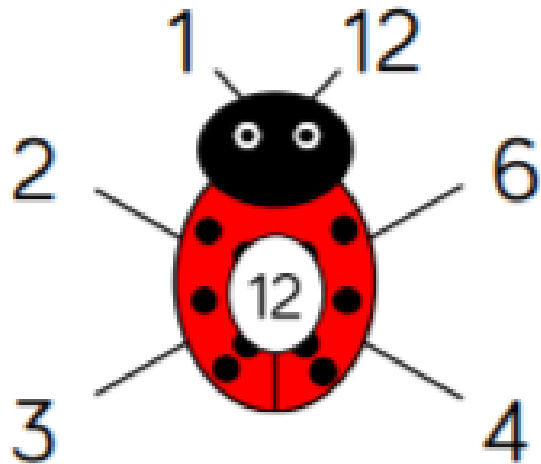


Are all the factors in pairs?

Recap – Factor pairs

Here is an example of a factor bug for 12

Complete the factor bug for 36



Are all the factors in pairs?

All the factors are in pairs except 6 as $6 \times 6 = 36$.

Click on the following link for the steps for multiplying 2 digit number by 1 digit number

<https://www.khanacademy.org/math/arithmetic/arith-review-multiply-divide/arith-review-multi-digit-mult/v/2-digit-times-1-digit-example-no-carrying>

TASK 1

Multiply 2 digit number by 1 digit number

Whitney uses place value counters to calculate 5×34



| | H | T | O | | |
|----------|---|---|---|-----------------|--|
| | | 3 | 4 | | |
| \times | | | 5 | | |
| | | 2 | 0 | (5×4) | |
| $+$ | 1 | 5 | 0 | (5×30) | |
| | 1 | 7 | 0 | | |

Use Whitney's method to solve

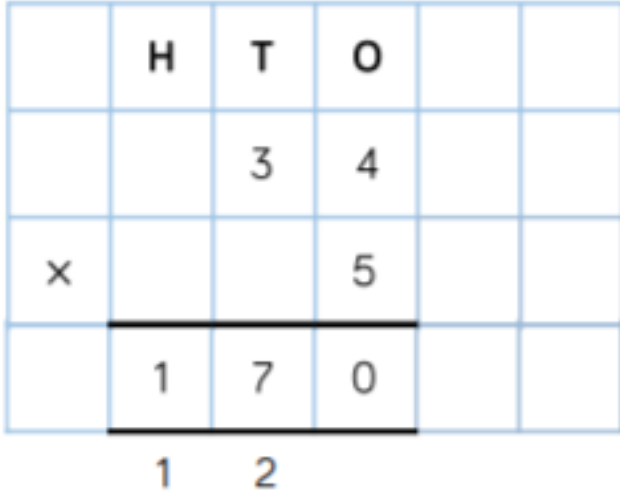
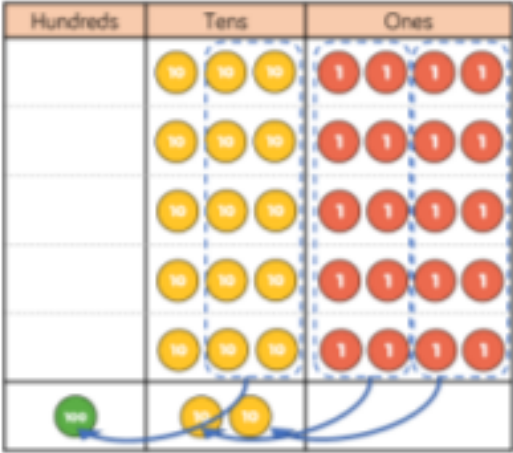
$$5 \times 42$$

$$23 \times 6$$

$$48 \times 3$$

Task 2

Ron also uses place value counters to calculate 5×34



Use Ron's method to complete:

| | | |
|---|---|---|
| | T | O |
| | 4 | 3 |
| x | | 3 |
| | | |

| | | |
|-------|---|---|
| | T | O |
| | 3 | 6 |
| × | | 4 |
| <hr/> | | |
| | | |

| | | |
|-------|---|---|
| | T | O |
| | 7 | 4 |
| x | | 5 |
| <hr/> | | |
| | | |

Task 3

Here are three incorrect multiplications.

| | | |
|-------|---|---|
| | T | O |
| | 6 | 1 |
| × | | 5 |
| <hr/> | | |
| | 3 | 5 |

| | | |
|-------|---|---|
| | T | O |
| | 7 | 4 |
| × | | 7 |
| <hr/> | | |
| 4 | 9 | 8 |

| | | |
|-------|---|---|
| | T | O |
| | 2 | 6 |
| × | | 4 |
| <hr/> | | |
| 8 | 2 | 4 |

Correct the multiplications.

Task 4

Always, sometimes, never

- When multiplying a two-digit number by a one-digit number, the product has 3 digits.
- When multiplying a two-digit number by 8 the product is odd.
- When multiplying a two-digit number by 7 you need to exchange.

Prove it.

Task 3

Here are three incorrect multiplications.

| | | |
|-------|---|---|
| | T | O |
| | 6 | 1 |
| × | | 5 |
| <hr/> | | |
| | 3 | 5 |

| | | |
|-------|---|---|
| | T | O |
| | 7 | 4 |
| × | | 7 |
| <hr/> | | |
| 4 | 9 | 8 |

| | | |
|-------|---|---|
| | T | O |
| | 2 | 6 |
| × | | 4 |
| <hr/> | | |
| 8 | 2 | 4 |

Correct the multiplications.

| | | |
|-------|---|---|
| | T | O |
| | 6 | 1 |
| × | | 5 |
| <hr/> | | |
| 3 | 0 | 5 |

3

| | | |
|-------|---|---|
| | T | O |
| | 7 | 4 |
| × | | 7 |
| <hr/> | | |
| 5 | 1 | 8 |

2

| | | |
|-------|---|---|
| | T | O |
| | 2 | 6 |
| × | | 4 |
| <hr/> | | |
| 1 | 0 | 4 |

2

Task 4

Answer

Always, sometimes, never

- When multiplying a two-digit number by a one-digit number, the product has 3 digits.
- When multiplying a two-digit number by 8 the product is odd.
- When multiplying a two-digit number by 7 you need to exchange.

Prove it.

Sometimes: 12×2 has only two-digits; 23×5 has three digits.

Never: all multiples of 8 are even.

Sometimes: most two-digit numbers need exchanging, but not 10 or 11