

1) Complete the missing parts in the table.



| Calculation | Model | Expanded Multiplication | Short Multiplication | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|-------------------------|----------------------|---|--|-------------|-----------|--|-------------|-----------|--|-------------|-----------|--|----|-----------|---|----|-----------|---|----------------------|----------------------|----------|---|--|----------------------|---|---|----------------------|----------------------|--|---|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|--|----------------------|---|---|----------------------|----------------------|--|----------------------|----------------------|----------|---|--|----------------------|--|---|----------------------|----------------------|--|---|----------------------|----------------------|----------------------|----------------------|--|--|----------------------|--|
| $32 \times 3 =$ <input type="text"/> | <table border="1"> <thead> <tr> <th>H</th> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td></td> <td>10 10 10</td> <td>1 1</td> </tr> <tr> <td></td> <td>10 10 10</td> <td>1 1</td> </tr> <tr> <td></td> <td>10 10 10</td> <td>1 1</td> </tr> </tbody> </table> | H | T | O | | 10 10 10 | 1 1 | | 10 10 10 | 1 1 | | 10 10 10 | 1 1 | <table border="1"> <thead> <tr> <th></th> <th>H</th> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>3</td> <td>2</td> </tr> <tr> <td>\times</td> <td></td> <td></td> <td>3</td> </tr> <tr> <td></td> <td></td> <td></td> <td><input type="text"/></td> </tr> <tr> <td></td> <td></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td></td> <td></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </tbody> </table> <p>(3×2) (3×30)</p> | | H | T | O | | | 3 | 2 | \times | | | 3 | | | | <input type="text"/> | | | <input type="text"/> | <input type="text"/> | | | <input type="text"/> | <input type="text"/> | <table border="1"> <thead> <tr> <th></th> <th>H</th> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td>3</td> </tr> <tr> <td>\times</td> <td></td> <td></td> <td>3</td> </tr> <tr> <td></td> <td></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> | | H | T | O | | | | 3 | \times | | | 3 | | | <input type="text"/> | <input type="text"/> | | | | | | | | | | |
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| | 10 10 10 | 1 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 10 10 10 | 1 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 10 10 10 | 1 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | H | T | O | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| \times | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | H | T | O | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| \times | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| $15 \times 5 =$ <input type="text"/> | <table border="1"> <thead> <tr> <th>H</th> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td></td> <td>10</td> <td>1 1 1 1 1</td> </tr> <tr> <td></td> <td>10</td> <td>1 1 1 1 1</td> </tr> <tr> <td></td> <td>10</td> <td>1 1 1 1 1</td> </tr> <tr> <td></td> <td>10</td> <td>1 1 1 1 1</td> </tr> <tr> <td></td> <td>10</td> <td>1 1 1 1 1</td> </tr> </tbody> </table> <p>10 10</p> | H | T | O | | 10 | 1 1 1 1 1 | | 10 | 1 1 1 1 1 | | 10 | 1 1 1 1 1 | | 10 | 1 1 1 1 1 | | 10 | 1 1 1 1 1 | <table border="1"> <thead> <tr> <th></th> <th>H</th> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>1</td> <td>5</td> </tr> <tr> <td>\times</td> <td></td> <td></td> <td>5</td> </tr> <tr> <td></td> <td></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td></td> <td></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td></td> <td></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </tbody> </table> <p>($\square \times \square$) ($\square \times \square$)</p> | | H | T | O | | | 1 | 5 | \times | | | 5 | | | <input type="text"/> | <input type="text"/> | | | <input type="text"/> | <input type="text"/> | | | <input type="text"/> | <input type="text"/> | <table border="1"> <thead> <tr> <th></th> <th>H</th> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td>5</td> </tr> <tr> <td>\times</td> <td></td> <td></td> <td>5</td> </tr> <tr> <td></td> <td></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td></td> <td></td> <td><input type="text"/></td> <td></td> </tr> </tbody> </table> | | H | T | O | | | | 5 | \times | | | 5 | | | <input type="text"/> | <input type="text"/> | | | <input type="text"/> | |
| H | T | O | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | 10 | 1 1 1 1 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 10 | 1 1 1 1 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 10 | 1 1 1 1 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 10 | 1 1 1 1 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | 1 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| \times | | | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <input type="text"/> | <input type="text"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | H | T | O | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| <input type="text"/> \times <input type="text"/> = <input type="text"/> | <table border="1"> <thead> <tr> <th>H</th> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td></td> <td>10 10 10 10</td> <td>1 1 1 1</td> </tr> <tr> <td></td> <td>10 10 10 10</td> <td>1 1 1 1</td> </tr> <tr> <td></td> <td>10 10 10 10</td> <td>1 1 1 1</td> </tr> </tbody> </table> <p>100 10</p> | H | T | O | | 10 10 10 10 | 1 1 1 1 | | 10 10 10 10 | 1 1 1 1 | | 10 10 10 10 | 1 1 1 1 | <table border="1"> <thead> <tr> <th></th> <th>H</th> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td>\times</td> <td></td> <td></td> <td><input type="text"/></td> </tr> <tr> <td></td> <td></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td></td> <td></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td></td> <td></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </tbody> </table> <p>($\square \times \square$) ($\square \times \square$)</p> | | H | T | O | | | <input type="text"/> | <input type="text"/> | \times | | | <input type="text"/> | | | <input type="text"/> | <input type="text"/> | | | <input type="text"/> | <input type="text"/> | | | <input type="text"/> | <input type="text"/> | <table border="1"> <thead> <tr> <th></th> <th>H</th> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td>\times</td> <td></td> <td></td> <td><input type="text"/></td> </tr> <tr> <td></td> <td></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td></td> <td></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </tbody> </table> | | H | T | O | | | <input type="text"/> | <input type="text"/> | \times | | | <input type="text"/> | | | <input type="text"/> | <input type="text"/> | | | <input type="text"/> | <input type="text"/> | | | | | | |
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| | 10 10 10 10 | 1 1 1 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 10 10 10 10 | 1 1 1 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 10 10 10 10 | 1 1 1 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | H | T | O | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <input type="text"/> | <input type="text"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| \times | | | <input type="text"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <input type="text"/> | <input type="text"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | <input type="text"/> | <input type="text"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | H | T | O | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <input type="text"/> | <input type="text"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| \times | | | <input type="text"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <input type="text"/> | <input type="text"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <input type="text"/> | <input type="text"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

2) Use short multiplication to solve these calculations.

a) $28 \times 7 =$

| | H | T | O |
|----------|---|---|---|
| | | | |
| \times | | | |
| | | | |
| | | | |

b) $59 \times 6 =$

| | H | T | O |
|----------|---|---|---|
| | | | |
| \times | | | |
| | | | |
| | | | |

c) $8 \times 74 =$

| | H | T | O |
|----------|---|---|---|
| | | | |
| \times | | | |
| | | | |
| | | | |

d) $5 \times 92 =$

| | H | T | O |
|----------|---|---|---|
| | | | |
| \times | | | |
| | | | |
| | | | |



1) Read the statement below. Is it true or false? Explain your answer.



When using short multiplication to multiply a 1-digit number by a 2-digit number, you must always start by multiplying the tens place digit by the single digit.

2) Which of these methods is the odd one out? Explain your reasoning.

(A)

| | | | |
|---|--|----------------------|----------------------|
| | | 2 | 4 |
| x | | | 4 |
| | | <input type="text"/> | <input type="text"/> |
| | | <input type="text"/> | |

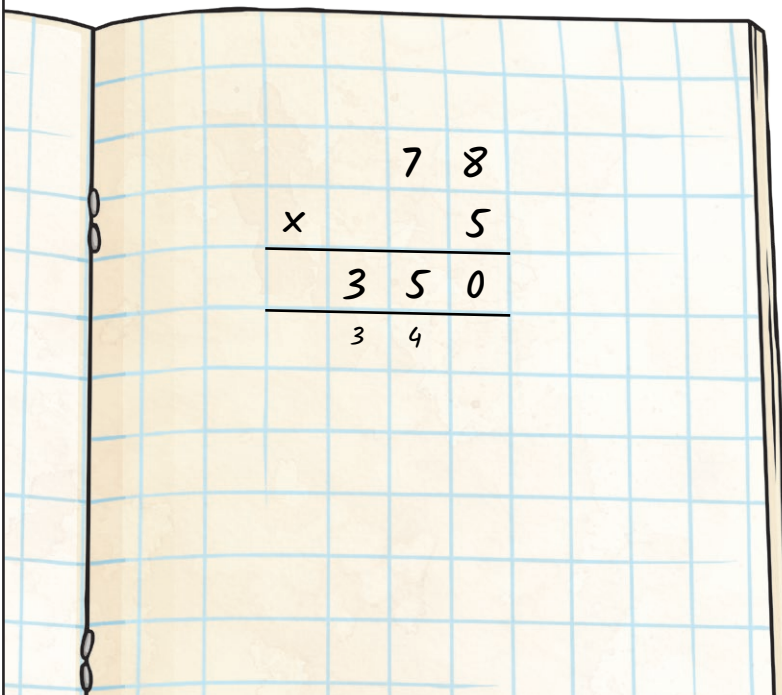
(B)

| | | | | |
|---|--|----------------------|----------------------|---|
| | | 2 | 4 | |
| x | | | 4 | |
| | | <input type="text"/> | <input type="text"/> | (<input type="text"/> × <input type="text"/>) |
| + | | <input type="text"/> | <input type="text"/> | (<input type="text"/> × <input type="text"/>) |
| | | <input type="text"/> | <input type="text"/> | |

(C)

| H | T | O | | | | |
|---|----|----|---|---|---|---|
| | 10 | 10 | 1 | 1 | 1 | 1 |
| | 10 | 10 | 1 | 1 | 1 | 1 |
| | 10 | 10 | 1 | 1 | 1 | 1 |
| | 10 | 10 | 1 | 1 | 1 | 1 |
| | 10 | 10 | 1 | 1 | 1 | 1 |

3) Can you identify and explain the mistake in Stefan's work? Then, work out the correct answer.





1) Can you identify the missing digits in these calculations?

a)

| | | | |
|---|----------------------|----------------------|----------------------|
| | | 5 | <input type="text"/> |
| x | | | 7 |
| | <input type="text"/> | <input type="text"/> | 4 |
| | <input type="text"/> | 1 | |

b)

| | | | |
|---|----------------------|----------------------|----------------------|
| | | 8 | <input type="text"/> |
| x | | | 3 |
| | <input type="text"/> | <input type="text"/> | 4 |
| | 2 | 2 | |

c)

| | | | |
|---|----------------------|----------------------|----------------------|
| | | <input type="text"/> | 8 |
| x | | | <input type="text"/> |
| | 6 | 1 | 2 |
| | <input type="text"/> | <input type="text"/> | |

d)

| | | | |
|---|----------------------|----------------------|----------------------|
| | | 4 | <input type="text"/> |
| x | | | 8 |
| | <input type="text"/> | 8 | <input type="text"/> |
| | <input type="text"/> | <input type="text"/> | |

2) Each letter stands for a number - 2, 3, 4, 6 or 8.

Can you identify which letter represents each number to solve the calculation?

| | | | |
|---|---|---|---|
| | | A | B |
| x | | | C |
| | D | C | C |
| | D | E | |

