



1) Complete these calculations.

a)

|       |   |   |   |
|-------|---|---|---|
|       |   | 3 | 2 |
|       | × | 4 | 3 |
| <hr/> |   |   |   |
|       |   | 9 | 6 |
|       |   |   |   |
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|       |   |   |   |

(32 × 3)

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b)

|       |   |   |   |
|-------|---|---|---|
|       |   | 5 | 4 |
|       | × | 2 | 7 |
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|       |   |   |   |

(54 × 7)

(54 × 20)

2) Set out and complete these calculations using the long multiplication method as above.

a)  $28 \times 43 =$

|       |  |  |  |  |
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b)  $64 \times 73 =$

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c)  $56 \times 35 =$

|       |  |  |  |  |
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1) Hugo has been practising long multiplication. For each question, can you spot his mistake and explain where he has gone wrong?

a)

|       |   |   |
|-------|---|---|
|       | 2 | 2 |
| ×     | 4 | 4 |
| <hr/> |   |   |
|       | 8 | 8 |
|       | 8 | 8 |
| <hr/> |   |   |
| 1     | 7 | 6 |

1

(22 × 4)  
(22 × 40)

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b)

|       |   |   |   |
|-------|---|---|---|
|       |   | 5 | 4 |
|       | × | 2 | 3 |
| <hr/> |   |   |   |
|       | 1 | 5 | 2 |
|       |   | 1 |   |
| 1     | 0 | 8 | 0 |
| <hr/> |   |   |   |
| 1     | 2 | 3 | 2 |

1

(54 × 3)  
(54 × 20)

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c)

|       |   |   |
|-------|---|---|
|       | 3 | 7 |
| ×     | 2 | 3 |
| <hr/> |   |   |
| 1     | 1 | 1 |
|       | 2 |   |
| 7     | 4 | 0 |
|       | 1 |   |
| 9     | 7 | 1 |

(37 × 3)  
(37 × 20)

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2) For each of these multiplication calculations, do you think it would be best to solve it using long multiplication, mental methods and jottings, times table knowledge or a combination of these methods? Explain why that would be the best method for that calculation.

| 42 × 38 = | 12 × 13 = | 68 × 11 |
|-----------|-----------|---------|
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3) Now carry out each multiplication using your suggested method.



1) Identify the missing digits in these calculations.

|       |   |   |   |
|-------|---|---|---|
|       |   |   | 3 |
|       | × | 5 | 3 |
| <hr/> |   |   |   |
|       | 1 | 2 | 9 |
|       | 1 |   |   |
|       | 1 |   |   |
| 2     |   | 7 |   |

|       |   |   |   |
|-------|---|---|---|
|       |   |   | 6 |
|       | × | 2 |   |
| <hr/> |   |   |   |
|       |   | 5 |   |
|       |   | 1 |   |
|       | 5 |   | 0 |
|       | 1 |   |   |
| 1     |   | 7 | 2 |

2) Pick a one-digit number and multiply it by 3. Then use long multiplication to multiply this new number by 37.

**For example:**

$$7 + 7 + 7 = 21$$

$$21 \times 37 = 777$$

Try this with three different numbers. What do you notice about the digits in each answer?

|       |   |  |  |
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|       |   |  |  |
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|       |   |  |  |
|-------|---|--|--|
|       |   |  |  |
|       | × |  |  |
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|       |   |  |  |
|       |   |  |  |

3) Does this work for all numbers with one digit? Can you find any numbers where it doesn't work? Why or why not do you think this is?

Explore and explain your findings. You may wish to use extra squared paper for your calculations.

If you have tested every one-digit number, try this for two-digit numbers. Do they fit in with the pattern?