**Bronze**

**1a. Use the fully expanded method to complete the calculation below.**

| | | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| x | | | 3 | 1 | |
| | | | | | (1 x 1) |
| | | | | | (1 x 20) |
| | | | | | (1 x 300) |
| | | | | | (30 x 1) |
| | | | | | (30 x 20) |
| | | | | | (30 x 300) |
| | | | | | Total |

321 x 31 = ☐

VF

**1b. Beau and Selina are working on the same calculation. They get different answers.**

Beau

| | 2 | 2 | 4 | |
|---|---|---|---|---|
| x | | 3 | 1 | |
| | | | 4 | (1 x 4) |
| | | | 2 | (1 x 20) |
| | | | 2 | (1 x 200) |
| | 1 | 2 | 0 | (30 x 4) |
| | 6 | 0 | 0 | (30 x 20) |
| 6 | 0 | 0 | 0 | (30 x 200) |
| 6 | 7 | 2 | 8 | |

Selina

| | 2 | 2 | 4 | |
|---|---|---|---|---|
| x | | 3 | 1 | |
| | | | 4 | (1 x 4) |
| | | 2 | 0 | (1 x 20) |
| | 2 | 0 | 0 | (1 x 200) |
| | 1 | 2 | 0 | (30 x 4) |
| | 6 | 0 | 0 | (30 x 20) |
| 6 | 0 | 0 | 0 | (30 x 200) |
| 6 | 9 | 4 | 4 | |

Who is correct?

PS

**2a. Complete the calculations below.**

A.

| | 2 | 0 | 3 | |
|---|---|---|---|---|
| x | | 3 | 2 | |
| | | | | (2 x 3) |
| | | | | (2 x 0) |
| | | | | (2 x 200) |
| | | | | (30 x 3) |
| | | | | (30 x 0) |
| | | | | (30 x 200) |
| | | | | Total |

B.

| | 3 | 1 | 4 | |
|---|---|---|---|---|
| x | | 2 | 1 | |
| | | | | (1 x 4) |
| | | | | (1 x 10) |
| | | | | (1 x 300) |
| | | | | (20 x 4) |
| | | | | (20 x 10) |
| | | | | (20 x 300) |
| | | | | Total |

Which has the larger answer?

VF

**2b. Complete the calculations so that calculation B is greater than calculation A.**

A.

| | 3 | 1 | 2 | |
|---|---|---|---|---|
| x | | 2 | 4 | |
| | | | | (4 x 2) |
| | | | | (4 x 10) |
| | | | | (4 x 300) |
| | | | | (20 x 2) |
| | | | | (20 x 10) |
| | | | | (20 x 300) |

B.

| | ☐ | ☐ | ☐ | |
|---|---|---|---|---|
| x | | 2 | 4 | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

PS

**3a. Elise says,**

My tablecloth is twice as big as the table.


| | | 2 | 3 | 4 | |
|---|---|---|---|---|---|
| x | | | 8 | 1 | |
| | | | | | (1 x 4) |
| | | | | | (1 x 30) |
| | | | | | (1 x 200) |
| | | | | | (80 x 4) |
| | | | | | (80 x 30) |
| | | | | | (80 x 200) |
| | | | | | Total |

What is the area of her tablecloth?

VF

**3b. Jan is waterproofing her decking. Each bottle covers an area of 3,000cm². The decking is 205cm x 42cm.**

| | 2 | 0 | 5 | |
|---|---|---|---|---|
| x | | 4 | 2 | |
| | | | | (2 x 5) |
| | | | | (2 x 0) |
| | | | | (2 x 200) |
| | | | | (40 x 5) |
| | | | | (40 x 0) |
| | | | | (40 x 200) |

She thinks she needs to buy 2 bottles. Is she correct? Explain your answer.

**Silver**

4a. Use the formal multiplication method to complete the calculation below.

| | | 1 | 6 | 2 |
|---|---|---|---|---|
| x | | | 4 | 2 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

E 162 x 42 = ☐ VF

5a. Complete the calculations below.

A.

| | 1 | 0 | 1 |
|---|---|---|---|
| x | | 4 | 2 |
| | | | |
| | | | |
| | | | |

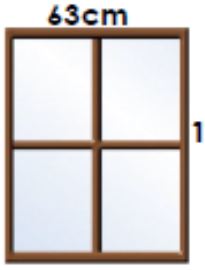
B.

| | 3 | 1 | 6 |
|---|---|---|---|
| x | | 1 | 2 |
| | | | |
| | | | |
| | | | |

E Which has the larger answer? VF

6a. Michael says,

My curtains are twice as big as the window.




| | 1 | 2 | 2 |
|---|---|---|---|
| x | | 6 | 3 |
| | | | |
| | | | |
| | | | |
| | | | |

E What is the area of his curtains? VF

4b. Chen and Jamie are working on the same calculation. They get different answers.

Chen

| | | 4 | 3 | 4 |
|---|---|---|---|---|
| x | | | 2 | 5 |
| | 2 | $1_1$ | $7_2$ | 0 |
| | 8 | 6 | 8 | 0 |
| 1 | 0 | 8 | 5 | 0 |
| | | 1 | | |

Jamie

| | | 4 | 3 | 4 |
|---|---|---|---|---|
| x | | | 2 | 5 |
| | 2 | $0_1$ | $5_2$ | 0 |
| | 8 | 6 | 8 | 0 |
| 1 | 0 | 6 | 3 | 0 |
| | | 1 | | |

E Who is correct? PS

5b. Complete the calculations so that calculation B is greater than calculation A.

A.

| | | 4 | 6 | 2 |
|---|---|---|---|---|
| x | | | 3 | 2 |
| | | | | |
| | | | | |
| | | | | |

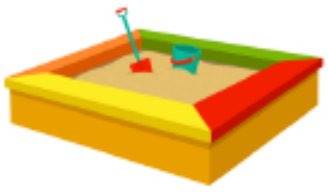
B.

| | | ☐ | ☐ | ☐ |
|---|---|---|---|---|
| x | | | ☐ | ☐ |
| | | | | |
| | | | | |
| | | | | |

E PS

6b. James is filling the sandpit with sand. One bag of sand covers an area of 1,000cm². The sandpit is 215cm x 95cm.

| x | | | | |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |



He thinks he needs to buy 21 bags of sand. Is he correct? Explain your answer.

**Gold**

**7a. Use the formal multiplication method to complete the calculation below.**

| | | | | |
|---|---|---|---|---|
| | | 3 | □ | 6 |
| x | | | 4 | □ |
| | | □$_1$ | 1$_1$ | 2 |
| □ | 4$_2$ | □$_2$ | 4 | □ |
| 1 | 4 | 9 | 5 | 2 |

3 □ 6 x 4 □ = 14,952

VF

**7b. Kate and Stanley are working on the same calculation. They get different answers.**

Kate

| | | | | |
|---|---|---|---|---|
| | | 3 | □ | 4 |
| x | | | 6 | □ |
| | 1 | 5$_3$ | 3$_1$ | 6 |
| 2 | 3$_5$ | 0$_2$ | 4 | 0 |
| 2 | 4 | 5 | 7 | 6 |

Stanley

| | | | | |
|---|---|---|---|---|
| | | 3 | □ | 4 |
| x | | | 6 | □ |
| 1 | 5$_3$ | 3$_1$ | 6 | 0 |
| 2 | 3$_5$ | 0$_2$ | 4 | 0 |
| 3 | 8 | 4 | 0 | 0 |
| | | 1 | | |

Who is correct?

PS

**8a. Complete the calculations below.**

A.

| | | | |
|---|---|---|---|
| | 1 | □ | 3 |
| x | | 5 | 1 |
| | □ | 2 | 3 |
| 6$_1$ | □$_1$ | 5 | □ |

B.

| | | | |
|---|---|---|---|
| | 3 | 1 | 2 |
| x | | 2 | □ |
| 1 | 8 | 7$_1$ | □ |
| 6 | 2 | □ | □ |
| 1 | 1 | | |

Which has the larger answer?

VF

**8b. Complete the calculations so that calculation B is less than calculation A.**

A.

| | | | |
|---|---|---|---|
| | 7 | 1 | 3 |
| x | | 2 | 4 |

B.

| | | | |
|---|---|---|---|
| | 7 | 1 | □ |
| x | | 2 | □ |

PS

**9a. Saura says,**

The school field is twice as big as the football pitch.

5□m

109m

| | | | | |
|---|---|---|---|---|
| | | 1 | 0 | 9 |
| x | | | 5 | □ |
| | | □ | 7$_7$ | □ |
| | □ | 4$_4$ | □ | □ |

What is the area of the field?

VF

**9b. Liam the gardener is sowing grass seed to cover a path. 1 packet covers 1,000cm². The length of the path is 682cm the width is between 70cm and 74cm. He has ordered 50 packets.**

x

Will there be enough grass seed? Explain

**Challenge**

1. The school council are organising a disco and want to advertise the event on a banner on the school fence, which has an area of 30,000cm². The headteacher has told them that they need to leave 75cm free on one side for some road safety posters. They are trying to decide which banner is the largest they can buy. What could the dimensions of the fence be?

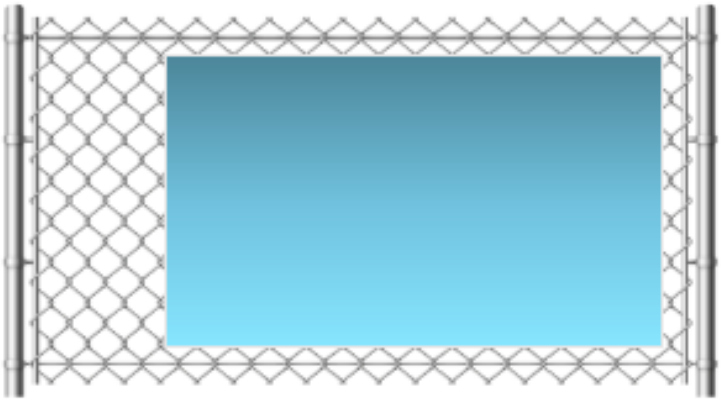
**Option A**
Dimensions: 225cm x 45cm

**Option B**
Dimensions: 250cm x 55cm

**Option C**
Dimensions: 275cm x 65cm

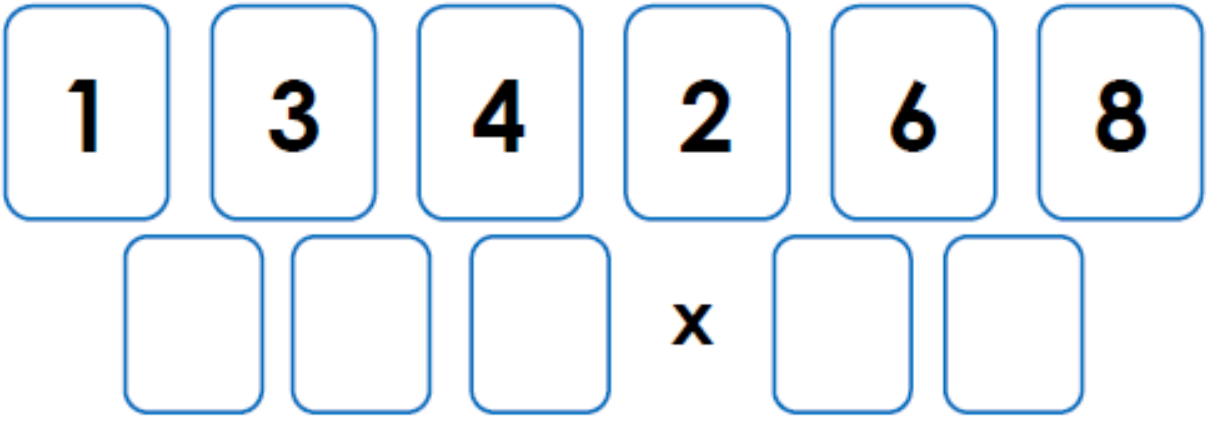
**Option D**
Dimensions: 325cm x 75cm

**Option E**
Dimensions: 385cm x 85cm



Which is the largest banner they can buy? Which other options can they buy?

2. Arrange the digit cards to make a calculation where the answer matches all four statements below.




The calculation equals a 5-digit number.

The digit total of the answer is less than 19.

One of the digits in the answer is 0.

The answer is divisible by 4.