Bronze

1a. 9,951
2a. A. 6,496; B. 6,594. The larger answer is B.
3a. 37,908cm²

1b. Selina is correct. 224 x 31 = 6,944
2b. Various possible answers where the total is greater than 7,488, for example: 322 x 24 = 7,728.
3b. Jan is incorrect. 205cm x 42cm = 8,610cm² so she will need to buy 3 bottles.

Silver

4a. 6,804
5a. A. 4,242; B. 3,792. The larger answer is A.
6a. 15,372cm².

4b. Chen is correct. 434 x 25 = 10,850
5b. Various possible answers where the total is greater than 14,784, for example: 464 x 43 = 19,952
6b. James is correct. 215cm x 95cm = 20,425cm² so he will need to buy 21 bags of sand.

Gold

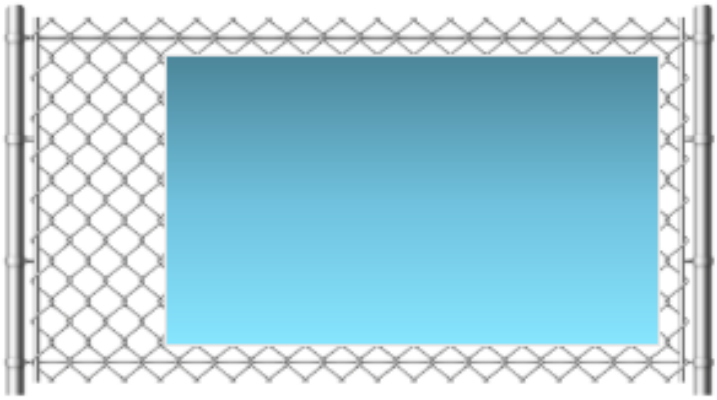
7a. 356 x 42 = 14,952
8a. A. 123 x 51 = 6,273;
B. 312 x 26 = 8,112. The larger answer is B.
9a. 12,644cm².

7b. Kate is correct. 384 x 64 = 24,576
8b. Various possible answers where the total is less than 17,112, for example: 711 x 22 = 15,642
9b. Liam will have enough grass seed if the width of the path is 73cm or less as 682cm x 73cm = 49,786m² but he will not have enough if the width of the path is 74cm as 682cm x 74cm = 50,468cm².

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? Various answers, for example: 300cm x 100cm; 400cm x 75cm; 500cm x 60cm

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?
Various answers, for example:
If fence is 300cm x 100cm, option A is the only one that will fit. If fence is 400cm x 75cm, options A, B, C and D will fit (D is the largest). If fence is 500cm x 60cm, options A and B will fit (B is the largest). If fence is 600 x 50cm, only option A will fit.

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

1	3	4	2	6	8

4	1	8	x	3	6

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.

Various possible answers, for example: 418 x 36 = 15,048.