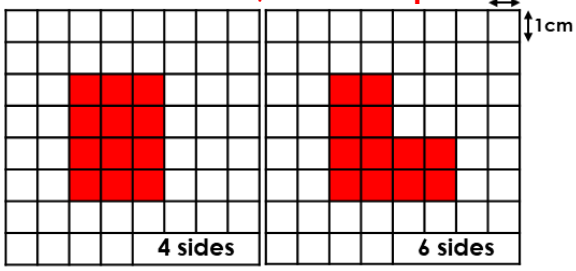
Reasoning and Problem Solving
Shapes – Same Area

Developing

1a. Various answers, for example:

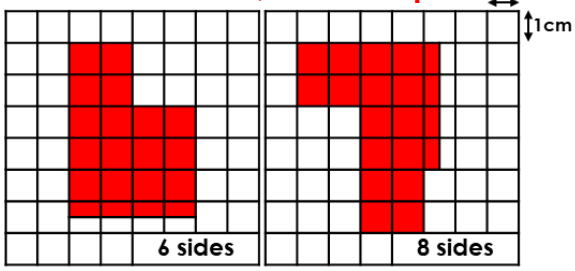


2a. False. Shape A and B have an area of 18cm², but shape C has an area of 19cm².

3a. Yes, he is correct. A shape with a length of 6cm and a width of 4cm will have an area of 24cm².

Expected

4a. Various answers, for example:

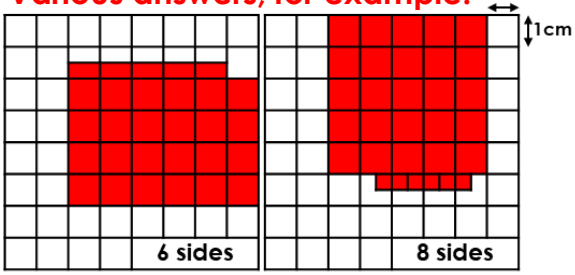


5a. False. Shape A and C have an area of 12cm², but shape B has an area of 18cm².

6a. Yes, she is correct. A shape with a length of 38cm and a width of 0.5cm would have an area of 19cm².

Greater Depth

7a. Various answers, for example:



8a. False. Shape A and B have an area of 27cm², but shape C has an area of 26cm².

9a. Yes, he is correct. A compound shape containing a rectangle 65mm by 40mm and a second rectangle, 5cm by 2cm, will have an area of 36cm².

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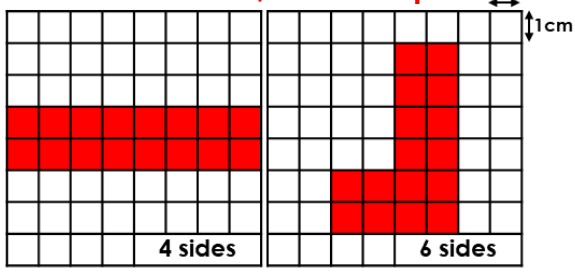
1b. Various answers, for example:

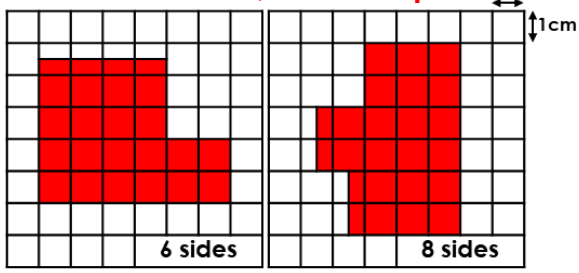


2b. False. Shape A and B have an area of 14cm², but Shape C has an area of 15cm².

3b. No, she is incorrect. There are no integers that can be multiplied by 8 to produce 27.

Expected

4b. Various answers, for example:

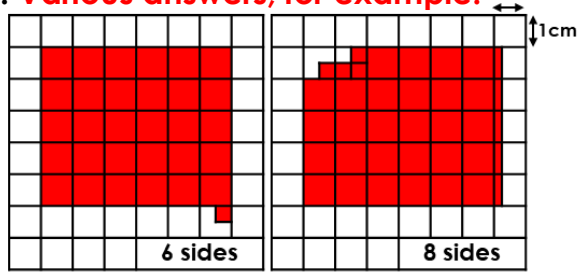


5b. True. All the shapes have an area of 24cm².

6b. Yes, he is correct. A rectilinear shape with a length of 8.5cm and width of 3cm, for one part and 1.5cm by 5cm for the second part, would have an area of 33cm².

Greater Depth

7b. Various answers, for example:



8b. False. Shape A and B have an area of 35cm², but shape C has an area of 36cm².

9b. Yes, she is correct. A compound shape consisting of two rectangles, one 25cm by 0.25 (6.25cm²) and 1.25 by 3cm (3.75cm²) gives an area of 10cm².