

## Monday (answers) – LO: to identify when shapes have the same area.

### Varied fluency

#### Developing

- 1a. B, D and E  
2a. Any rectilinear shape with an area of  $14\text{cm}^2$ .  
3a. Any rectangles with an area of  $18\text{cm}^2$ .  
For example:  $1\text{cm} \times 18\text{cm}$ ;  $2\text{cm} \times 9\text{cm}$ ;  $3\text{cm} \times 6\text{cm}$ .  
4a.  $A = 12\text{cm}$ ;  $B = 3\text{cm}$ ;  $C = 6\text{cm}$

#### Expected

- 5a. A, B and D  
6a. Any rectilinear shape with an area of  $18\text{cm}^2$ .  
7a. Any combination of 3 rectangles with a combined area of  $24\text{cm}^2$  and where at least one conversion takes place. For example:  $3\text{cm} \times 30\text{mm}$ ;  $5\text{cm} \times 2\text{cm}$ ;  $100\text{mm} \times 0.5\text{cm}$ .  
8a.  $A = 72\text{cm}$ ;  $B = 30\text{mm}/3\text{cm}$ ;  
 $C = 90\text{mm}/9\text{cm}$

#### Greater Depth

- 9a. A, C and D  
10a. Any rectilinear shape with an area of  $30\text{cm}^2$ .  
11a. Any composite rectilinear shapes with an area of  $360\text{mm}^2$ , where at least two conversions have taken place and where one side measures  $1.5\text{cm}$ .  
12a.  $A = 50\text{cm}/500\text{mm}/0.5\text{m}$   
 $B = 0.05\text{m}/5\text{cm}/50\text{mm}$   
 $C = 300\text{mm}/30\text{cm}/0.3\text{m}$

### Reasoning and problem solving

#### Developing

- 1b. Various possibilities, accept any 4-sided and 6-sided shapes with an area of  $16\text{cm}^2$ .  
2b. False. Shape A and B have an area of  $14\text{cm}^2$ , but Shape C has an area of  $15\text{cm}^2$ .  
3b. Yes, he is correct. Shape A has an area of  $12\text{cm}^2$  and shape B has an area of  $20\text{cm}^2$ . Shape C should go in the  $>14\text{cm}^2$  column as it has an area of  $18\text{cm}^2$ .

#### Expected

- 4b. Various possibilities, accept any 6-sided and 8-sided shapes with an area of  $22\text{cm}^2$ .  
5b. True. All the shapes have an area of  $24\text{cm}^2$ .  
6b. No, she is not correct because shape B has an area of  $18\text{cm}^2$  so should be in the  $<20\text{cm}^2$  column. Shape C should go in the  $>20\text{cm}^2$  column as it has an area of  $30\text{cm}^2$ .

#### Greater Depth

- 7b. Various possibilities, accept any 6-sided and 8-sided shapes that have an area of  $30\text{cm}^2$  and a perimeter greater than  $30\text{cm}$ .  
8b. False. Shape B and C have an area of  $35\text{cm}^2$ , but shape A has an area of  $36\text{cm}^2$ .  
9b. No, he is not correct because shape A has an area of  $33\text{cm}^2$  so should be in the  $>28\text{cm}^2$  column. Shape C should go in the  $<28\text{cm}^2$  column as it has an area of  $25\text{cm}^2$ .