

1)

2^2	2×2	4
3^2	3×3	9
3^3	$3 \times 3 \times 3$	27
6^2	6×6	36
5^3	$5 \times 5 \times 5$	125
8^2	8×8	64
4^3	$4 \times 4 \times 4$	64
5^2	5×5	25
2^3	$2 \times 2 \times 2$	8

2)

- a) $3^2 < 5 \times 5 > 2^3$ d) $1 \times 1 \times 1 = 1^2 = 1^3$
 b) $4^3 > 6^2 > 4 \times 4$ e) $10^2 > 4^3 > 6^2$
 c) $9 \times 9 < 5^3 = 5 \times 5 \times 5$ f) $3^3 > 5^2 < 4 \times 4 \times 4$



1) Angus and Ruby have not filled the Venn diagram in entirely correctly. They should not have put 1 and 64 in the squared section, as they are both square and cube numbers and should go in the centre section of the diagram. 25 and 100 should not be in the centre section. They should be in the square numbers section. 9 should be located in the squared section rather than 'outside' the intersecting circles.

2) Ruby is correct that 8 will go into that section of the diagram. 8 is 2 cubed and is also a multiple of 4. She is incorrect that 16 will go into that section, as it is a multiple of 4 but not a cubed number. She would need to put 16 into the squared and multiple of 4 section.

Angus is incorrect because 64 will go into the centre of the diagram.



1) $\square + \square = \square$

Possible answers include: $9 + 16 = 25$; $27 + 9 = 36$

$\square - \square = \square$

Possible answers include: $100 - 64 = 36$; $25 - 16 = 9$

$\square + \square = \square - \square$

Possible answers include: $27 + 1 = 64 - 36$; $8 + 4 = 16 - 4$

$\square + \square = \square + \square$

Possible answers include: $36 + 49 = 4 + 81$; $49 + 16 = 64 + 1$

