

Outcome 2 - Multiplying out Double Brackets

Bronze examples...

Examples...

Multiply everything in second bracket by $x!$

$$(x+2)(x+7)$$

$$= x^2 + 7x + 2x + 14$$

$$= x^2 + 9x + 14$$

Multiply everything in second bracket by $2!$

$$(x+9)(x+5)$$

$$= x^2 + 5x + 9x + 45$$

$$= x^2 + 14x + 45$$

Silver examples

Examples...

Multiply everything in second bracket by $x!$

$$(x-4)(x+7)$$

$$= x^2 + 7x - 4x - 28$$

$$= x^2 + 3x - 28$$

Multiply everything in second bracket by $-4!$

$$(x+3)(x-9)$$

$$= x^2 - 9x + 3x - 27$$

$$= x^2 - 6x - 27$$

Gold examples

Examples...

Multiply everything in second bracket by $x!$

$$(x-2)(x-8)$$

$$= x^2 - 8x - 2x + 16$$

$$= x^2 - 10x + 16$$

Multiply everything in second bracket by $-2!$

$$(4x-3)(x-7)$$

$$= 4x^2 - 28x - 3x + 21$$

$$= 4x^2 - 31x + 21$$

Bronze Questions

Expand the following double brackets...

 $(x+1)(x+3)$  $(x+4)(x+5)$

 $(x+6)(x+1)$  $(x+7)(x+3)$

 $(x+8)(x+8)$  $(x+3)(x+2)$

 $(x+4)(x+10)$  $(x+6)(x+9)$

 $(x+8)(x+4)$  $(x+7)(x+9)$

Silver Questions

Expand the following double brackets...

 $(x-1)(x+8)$  $(x-3)(x+8)$

 $(x+9)(x-1)$  $(x+6)(x-4)$

 $(x-7)(x+7)$  $(x+5)(x-6)$

 $(x+9)(x-12)$  $(x-8)(x+5)$

 $(x-9)(x+6)$  $(x+3)(x-7)$

Gold Questions

Expand the following double brackets...

 $(x-1)(x-4)$  $(x-3)(x-7)$

 $(x-6)(x-1)$  $(x-9)(x-3)$

 $(2x-4)(x-5)$  $(3x-2)(x-9)$

 $(x-8)(7x-10)$  $(x-5)(4x-3)$

 $(3x-2)(2x-6)$  $(5x-6)(8x-9)$

Bronze Answers

- | | |
|---------------------|----------------------|
| 1. $x^2 + 4x + 3$ | 2. $x^2 + 9x + 20$ |
| 3. $x^2 + 7x + 6$ | 4. $x^2 + 10x + 21$ |
| 5. $x^2 + 16x + 64$ | 6. $x^2 + 5x + 6$ |
| 7. $x^2 + 14x + 40$ | 8. $x^2 + 15x + 54$ |
| 9. $x^2 + 12x + 32$ | 10. $x^2 + 16x + 63$ |

Silver Answers

- | | |
|---------------------|---------------------|
| 1. $x^2 + 7x - 8$ | 2. $x^2 + 5x - 24$ |
| 3. $x^2 + 8x - 9$ | 4. $x^2 + 2x - 24$ |
| 5. $x^2 - 49$ | 6. $x^2 - x - 30$ |
| 7. $x^2 - 3x - 108$ | 8. $x^2 - 3x - 40$ |
| 9. $x^2 - 3x - 54$ | 10. $x^2 - 4x - 21$ |

Gold Answers

- | | |
|----------------------|------------------------|
| 1. $x^2 - 5x + 4$ | 2. $x^2 - 10x + 21$ |
| 3. $x^2 - 7x + 6$ | 4. $x^2 - 12x + 27$ |
| 5. $2x^2 - 14x + 20$ | 6. $3x^2 - 29x + 18$ |
| 7. $7x^2 - 66x + 80$ | 8. $4x^2 - 23x + 15$ |
| 9. $6x^2 - 22x + 12$ | 10. $40x^2 - 93x + 54$ |