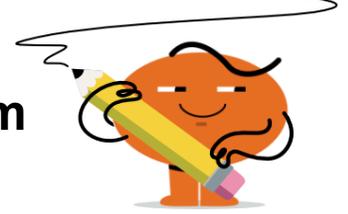




## Algebraic Functions - Quadratic to Sum and Product - with Negatives



**1** What is true about 'a' and 'b' for this quadratic?

$$x^2 - 1x + -42 = (x + a)(x + b)$$

- |                   |                    |                    |                    |
|-------------------|--------------------|--------------------|--------------------|
| A                 | B                  | C                  | D                  |
| $a + b = -42$     | $a + b = -2$       | $a + b = -1$       | $a + b = -1$       |
| $a \times b = -1$ | $a \times b = -42$ | $a \times b = -42$ | $a \times b = -84$ |

**2** What is true about 'a' and 'b' for this quadratic?

$$x^2 + 3x + -18 = (x + a)(x + b)$$

- |                    |                    |                  |                    |
|--------------------|--------------------|------------------|--------------------|
| A                  | B                  | C                | D                  |
| $a + b = 3$        | $a + b = 3$        | $a + b = -18$    | $a + b = 6$        |
| $a \times b = -18$ | $a \times b = -36$ | $a \times b = 3$ | $a \times b = -18$ |

**3** What is true about 'a' and 'b' for this quadratic?

$$x^2 - 8x + 15 = (x + a)(x + b)$$

- |                   |                   |                   |                   |
|-------------------|-------------------|-------------------|-------------------|
| A                 | B                 | C                 | D                 |
| $a + b = -8$      | $a + b = -8$      | $a + b = -16$     | $a + b = 15$      |
| $a \times b = 30$ | $a \times b = 15$ | $a \times b = 15$ | $a \times b = -8$ |

**4** What is true about 'a' and 'b' for this quadratic?

$$x^2 - 6x + -27 = (x + a)(x + b)$$

- |                    |                    |                    |                   |
|--------------------|--------------------|--------------------|-------------------|
| A                  | B                  | C                  | D                 |
| $a + b = -6$       | $a + b = -6$       | $a + b = -12$      | $a + b = -27$     |
| $a \times b = -54$ | $a \times b = -27$ | $a \times b = -27$ | $a \times b = -6$ |

**5** What is true about 'a' and 'b' for this quadratic?

$$x^2 - 5x + 4 = (x + a)(x + b)$$

- |                  |                   |                  |                  |
|------------------|-------------------|------------------|------------------|
| A                | B                 | C                | D                |
| $a + b = -5$     | $a + b = 4$       | $a + b = -5$     | $a + b = -10$    |
| $a \times b = 4$ | $a \times b = -5$ | $a \times b = 8$ | $a \times b = 4$ |

**6** What is true about 'a' and 'b' for this quadratic?

$$x^2 - 7x + -8 = (x + a)(x + b)$$

- |                   |                   |                   |                    |
|-------------------|-------------------|-------------------|--------------------|
| A                 | B                 | C                 | D                  |
| $a + b = -14$     | $a + b = -8$      | $a + b = -7$      | $a + b = -7$       |
| $a \times b = -8$ | $a \times b = -7$ | $a \times b = -8$ | $a \times b = -16$ |

**7** What is true about 'a' and 'b' for this quadratic?

$$x^2 + 8x + 16 = (x + a)(x + b)$$

- |                   |                  |                   |                   |
|-------------------|------------------|-------------------|-------------------|
| A                 | B                | C                 | D                 |
| $a + b = 16$      | $a + b = 16$     | $a + b = 8$       | $a + b = 8$       |
| $a \times b = 16$ | $a \times b = 8$ | $a \times b = 16$ | $a \times b = 32$ |

**8** What is true about 'a' and 'b' for this quadratic?

$$x^2 - 10x + 9 = (x + a)(x + b)$$

- |                    |                  |                  |                   |
|--------------------|------------------|------------------|-------------------|
| A                  | B                | C                | D                 |
| $a + b = 9$        | $a + b = -10$    | $a + b = -20$    | $a + b = -10$     |
| $a \times b = -10$ | $a \times b = 9$ | $a \times b = 9$ | $a \times b = 18$ |