



Polynomial Inequalities - Factored Quadratic - Solution Set

1 Which set of values satisfies this inequality?

$$(x + 3)(x - 1) < 0$$

- | | |
|--------------------------------|---|
| A $(-\infty, -4) \cup (-3, 1)$ | B $(-\infty, -3) \cup (1, \infty)$ |
| C $(-3, 1)$ | D $(-\infty, -3) \cup (-3, 1) \cup (1, \infty)$ |

2 Which set of values satisfies this inequality?

$$(x + 2)(x + 1) < 0$$

- | | |
|---|---------------------------------|
| A $(-\infty, -2) \cup (-1, \infty)$ | B $(-\infty, -4) \cup (-2, -1)$ |
| C $(-\infty, -2) \cup (-2, -1) \cup (-1, \infty)$ | D $(-2, -1)$ |

3 Which set of values satisfies this inequality?

$$(x - 3)(x - 4) > 0$$

- | | |
|-----------------------------------|---|
| A $(3, 4)$ | B $(-\infty, 3) \cup (3, 4) \cup (4, \infty)$ |
| C $(-\infty, 3) \cup (4, \infty)$ | D $(-4, 3) \cup (4, \infty)$ |

4 Which set of values satisfies this inequality?

$$(x + 4)(x - 3) < 0$$

- | | |
|------------------------------------|---|
| A $(-4, 3)$ | B $(-\infty, -4) \cup (-4, 3) \cup (3, \infty)$ |
| C $(-\infty, -4) \cup (3, \infty)$ | D $(-\infty, -4) \cup (-3, 3)$ |

5 Which set of values satisfies this inequality?

$$(x + 1)(x - 4) > 0$$

- | | |
|------------------------------------|---|
| A $(-\infty, -1) \cup (4, \infty)$ | B $(-\infty, -1) \cup (-1, 4) \cup (4, \infty)$ |
| C $(-4, -1) \cup (4, \infty)$ | D $(-1, 4)$ |

6 Which set of values satisfies this inequality?

$$(x - 1)(x - 4) < 0$$

- | | |
|---|-----------------------------------|
| A $(-\infty, 1) \cup (1, 4) \cup (4, \infty)$ | B $(-\infty, 1) \cup (4, \infty)$ |
| C $(1, 4)$ | D $(-\infty, -4) \cup (1, 4)$ |

7 Which set of values satisfies this inequality?

$$(x + 1)(x - 2) < 0$$

- | | |
|------------------------------------|---|
| A $(-\infty, -1) \cup (2, \infty)$ | B $(-1, 2)$ |
| C $(-\infty, -4) \cup (-1, 2)$ | D $(-\infty, -1) \cup (-1, 2) \cup (2, \infty)$ |

8 Which set of values satisfies this inequality?

$$(x + 2)(x - 2) > 0$$

- | | |
|---|-------------------------------|
| A $(-\infty, -2) \cup (-2, 2) \cup (2, \infty)$ | B $(-2, 2)$ |
| C $(-\infty, -2) \cup (2, \infty)$ | D $(-4, -2) \cup (2, \infty)$ |