



Polynomial Inequalities - Factored Quadratic - Intervals

1 On which set of open intervals does this polynomial keep a constant sign? $(x - 1)(x - 3)$

^A $(-\infty, -3) \cup (-3, 1) \cup (1, 3) \cup (3, \infty)$ ^B $(-\infty, -4) \cup (-4, 1) \cup (1, 3) \cup (3, \infty)$

^C $(-\infty, 1) \cup (1, 3) \cup (3, \infty)$ ^D $(-\infty, -2) \cup (-2, 1) \cup (1, 3) \cup (3, \infty)$

2 On which set of open intervals does this polynomial keep a constant sign? $(x - 2)(x - 3)$

^A $(-\infty, -3) \cup (-3, 2) \cup (2, 3) \cup (3, \infty)$ ^B $(-\infty, -2) \cup (-2, 2) \cup (2, 3) \cup (3, \infty)$

^C $(-\infty, -4) \cup (-4, 2) \cup (2, 3) \cup (3, \infty)$ ^D $(-\infty, 2) \cup (2, 3) \cup (3, \infty)$

3 On which set of open intervals does this polynomial keep a constant sign? $(x + 1)(x - 1)$

^A $(-\infty, -4) \cup (-4, -1) \cup (-1, 1) \cup (1, \infty)$ ^B $(-\infty, -3) \cup (-3, -1) \cup (-1, 1) \cup (1, \infty)$

^C $(-\infty, -1) \cup (-1, 1) \cup (1, \infty)$ ^D $(-\infty, -2) \cup (-2, -1) \cup (-1, 1) \cup (1, \infty)$

4 On which set of open intervals does this polynomial keep a constant sign? $(x + 2)(x - 3)$

^A $(-\infty, -4) \cup (-4, -2) \cup (-2, 3) \cup (3, \infty)$ ^B $(-\infty, -3) \cup (-3, -2) \cup (-2, 3) \cup (3, \infty)$

^C $(-\infty, -2) \cup (-2, 3) \cup (3, \infty)$ ^D $(-\infty, -2) \cup (-2, -1) \cup (-1, 3) \cup (3, \infty)$

5 On which set of open intervals does this polynomial keep a constant sign? $(x + 2)x$

^A $(-\infty, -3) \cup (-3, -2) \cup (-2, 0) \cup (0, \infty)$ ^B $(-\infty, -4) \cup (-4, -2) \cup (-2, 0) \cup (0, \infty)$

^C $(-\infty, -2) \cup (-2, 0) \cup (0, \infty)$ ^D $(-\infty, -2) \cup (-2, -1) \cup (-1, 0) \cup (0, \infty)$

6 On which set of open intervals does this polynomial keep a constant sign? $x(x - 1)$

^A $(-\infty, 0) \cup (0, 1) \cup (1, \infty)$ ^B $(-\infty, -3) \cup (-3, 0) \cup (0, 1) \cup (1, \infty)$

^C $(-\infty, -4) \cup (-4, 0) \cup (0, 1) \cup (1, \infty)$ ^D $(-\infty, -2) \cup (-2, 0) \cup (0, 1) \cup (1, \infty)$

7 On which set of open intervals does this polynomial keep a constant sign? $(x + 4)(x + 3)$

^A $(-\infty, -4) \cup (-4, -3) \cup (-3, \infty)$ ^B $(-\infty, -4) \cup (-4, -3) \cup (-3, -2) \cup (-2, \infty)$

^C $(-\infty, -4) \cup (-4, -3) \cup (-3, -1) \cup (-1, \infty)$ ^D $(-\infty, -4) \cup (-4, -3) \cup (-3, 0) \cup (0, \infty)$

8 On which set of open intervals does this polynomial keep a constant sign? $(x + 2)(x + 1)$

^A $(-\infty, -2) \cup (-2, -1) \cup (-1, 0) \cup (0, \infty)$ ^B $(-\infty, -3) \cup (-3, -2) \cup (-2, -1) \cup (-1, \infty)$

^C $(-\infty, -2) \cup (-2, -1) \cup (-1, \infty)$ ^D $(-\infty, -4) \cup (-4, -2) \cup (-2, -1) \cup (-1, \infty)$