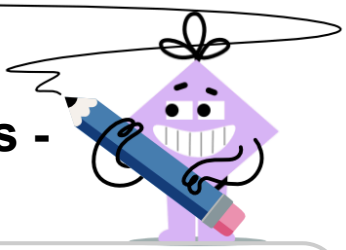
Name

Polynomial Inequalities - Three Factors - Intervals



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

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

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

C $(-\infty,-3)\cup(-3,0)\cup(0,2)\cup(2,\infty)$

D $(-\infty,-3)\cup(-3,-2)\cup(-2,0)\cup(0,2)\cup(2,\infty)$

2 On which set of open intervals does this polynomial keep a constant sign?

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

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

B $(-\infty,-3)\cup(-3,-1)\cup(-1,1)\cup(1,3)\cup(3,\infty)$

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

D $(-\infty,-3)\cup(-3,1)\cup(1,3)\cup(3,\infty)$

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

A $(-\infty,-4)\cup(-4,-1)\cup(-1,0)\cup(0,3)\cup(3,\infty)$

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

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

D $(-\infty,-4)\cup(-4,-2)\cup(-2,0)\cup(0,3)\cup(3,\infty)$

4 On which set of open intervals does this polynomial keep a constant sign?

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

A $(-\infty,-4)\cup(-4,-3)\cup(-3,3)\cup(3,\infty)$

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

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

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

5 On which set of open intervals does this polynomial keep a constant sign?

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

A $(-\infty,-4)\cup(-4,-1)\cup(-1,0)\cup(0,1)\cup(1,\infty)$

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

C $(-\infty,-4)\cup(-4,-1)\cup(-1,1)\cup(1,\infty)$

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

6 On which set of open intervals does this polynomial keep a constant sign?

$$(x+3)(x+2)(x-3)$$

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

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

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

D $(-\infty,-3)\cup(-3,-2)\cup(-2,0)\cup(0,3)\cup(3,\infty)$

7 On which set of open intervals does this polynomial keep a constant sign?

$$(x+2)(x-2)(x-4)$$

A $(-\infty,-4)\cup(-4,-2)\cup(-2,2)\cup(2,4)\cup(4,\infty)$

B $(-\infty,-2)\cup(-2,2)\cup(2,4)\cup(4,\infty)$

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

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

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

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

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

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

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