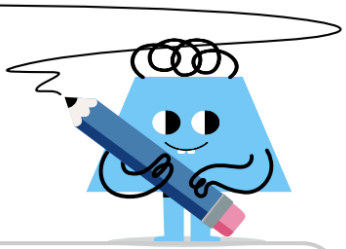
Name

Polynomial Inequalities - Two Factors with Multiplicity - Intervals



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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

6 On which set of open intervals does this polynomial keep a constant sign? $(x-1)^4(x-2)^5$

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

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

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

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

7 On which set of open intervals does this polynomial keep a constant sign? $x^5(x-3)^4$

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

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

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

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

8 On which set of open intervals does this polynomial keep a constant sign? $(x+4)(x+1)^2$

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

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

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

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