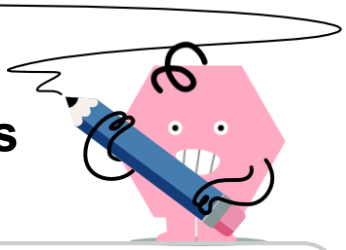
Name

Polynomial Inequalities - Three Factors with Multiplicity - Solution Set



1 Which set of values satisfies this inequality?

$$(x+3)(x+1)^3(x-3)^4 < 0$$

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

2 Which set of values satisfies this inequality?

$$(x+4)^4(x-2)^3(x-3) < 0$$

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

3 Which set of values satisfies this inequality?

$$(x+2)^3(x+1)^4(x-3)^4 > 0$$

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

4 Which set of values satisfies this inequality?

$$(x+2)^2(x-1)^4(x-2)^3 < 0$$

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

5 Which set of values satisfies this inequality?

$$(x+4)^3(x+2)^2(x-1)^4 < 0$$

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

6 Which set of values satisfies this inequality?

$$(x+4)^3(x+3)^4x^5 < 0$$

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

7 Which set of values satisfies this inequality?

$$x(x-1)^5(x-3)^2 < 0$$

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

8 Which set of values satisfies this inequality?

$$(x+4)^2(x+3)(x-4)^2 < 0$$

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