



Polynomial Inequalities - Two Factors with Multiplicity - Inequality Validity Chart

1 Which chart correctly shows the intervals where this inequality is valid?

$$(x + 1)^5(x - 1)^4 < 0$$

Interval	Valid
(-?, -1)	No
(-1, ?)	Yes

Interval	Valid
(-?, -1)	No
(-1, 1)	Yes
(1, ?)	No

Interval	Valid
(-?, -4)	No
(-4, -1)	Yes
(-1, ?)	No

Interval	Valid
(-?, -1)	Yes
(-1, ?)	No

2 Which chart correctly shows the intervals where this inequality is valid?

$$x^5(x - 2)^2 > 0$$

Interval	Valid
(-?, 0)	Yes
(0, 2)	No
(2, ?)	Yes

Interval	Valid
(-?, -4)	Yes
(-4, 0)	No
(0, ?)	Yes

Interval	Valid
(-?, 0)	Yes
(0, ?)	No

Interval	Valid
(-?, 0)	No
(0, ?)	Yes

3 Which chart correctly shows the intervals where this inequality is valid?

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

Interval	Valid
(-?, -4)	No
(-4, 3)	Yes
(3, ?)	No

Interval	Valid
(-?, 3)	No
(3, ?)	Yes

Interval	Valid
(-?, 3)	Yes
(3, ?)	No

Interval	Valid
(-?, 0)	No
(0, 3)	Yes
(3, ?)	No

4 Which chart correctly shows the intervals where this inequality is valid?

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

Interval	Valid
(-?, 1)	No
(1, ?)	Yes

Interval	Valid
(-?, -4)	No
(-4, 1)	Yes
(1, ?)	No

Interval	Valid
(-?, 1)	Yes
(1, ?)	No

Interval	Valid
(-?, -2)	No
(-2, 1)	Yes
(1, ?)	No

5 Which chart correctly shows the intervals where this inequality is valid?

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

Interval	Valid
(-?, -4)	No
(-4, 2)	Yes
(2, ?)	No

Interval	Valid
(-?, 2)	Yes
(2, ?)	No

Interval	Valid
(-?, 2)	No
(2, ?)	Yes

Interval	Valid
(-?, -3)	No
(-3, 2)	Yes
(2, ?)	No

6 Which chart correctly shows the intervals where this inequality is valid?

$$(x + 4)^5(x - 3)^2 > 0$$

Interval	Valid
(-?, -4)	Yes
(-4, -3)	No
(-3, ?)	Yes

Interval	Valid
(-?, -4)	Yes
(-4, ?)	No

Interval	Valid
(-?, -4)	No
(-4, ?)	Yes

Interval	Valid
(-?, -4)	Yes
(-4, 3)	No
(3, ?)	Yes

7 Which chart correctly shows the intervals where this inequality is valid?

$$(x + 1)^5(x - 1)^2 > 0$$

Interval	Valid
(-?, -1)	Yes
(-1, 1)	No
(1, ?)	Yes

Interval	Valid
(-?, -1)	No
(-1, ?)	Yes

Interval	Valid
(-?, -1)	Yes
(-1, ?)	No

Interval	Valid
(-?, -4)	Yes
(-4, -1)	No
(-1, ?)	Yes

8 Which chart correctly shows the intervals where this inequality is valid?

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

Interval	Valid
(-?, -1)	No
(-1, ?)	Yes

Interval	Valid
(-?, -4)	Yes
(-4, -1)	No
(-1, ?)	Yes

Interval	Valid
(-?, -3)	Yes
(-3, -1)	No
(-1, ?)	Yes

Interval	Valid
(-?, -1)	Yes
(-1, ?)	No