Name

Rational Function Inequalities - Three Factors with Multiplicity over Binomial - Inequality Validity Chart

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

$$\frac{(x+4)^5(x+3)^2(x+2)^3}{x-4} < 0$$

A

Interval	Valid
(-?, -4)	No
(-4, -2)	Yes
(-2, -1)	No
(-1, 4)	Yes
(4, ?)	No

B

Interval	Valid
(-?, -4)	No
(-4, -3)	Yes
(-3, -2)	No
(-2, 4)	Yes
(4, ?)	No

C

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

D

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

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

$$\frac{(x+4)^3(x-2)^2(x-4)^4}{x-1} > 0$$

A

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

B

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

C

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

D

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

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

$$\frac{(x+1)^3x^4(x-2)^5}{x+2} < 0$$

A

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

B

Interval	Valid
(-?, -2)	No
(-2, -1)	Yes
(-1, 0)	No
(0, 2)	Yes
(2, ?)	No

C

Interval	Valid
(-?, -4)	No
(-4, -2)	Yes
(-2, -1)	No
(-1, 2)	Yes
(2, ?)	No

D

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

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

$$\frac{(x+2)^4(x-1)^3(x-4)^3}{x-3} > 0$$

A

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

B

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

C

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

D

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

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

$$\frac{(x+4)^2(x+3)^5(x-4)^3}{x-3} > 0$$

A

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

B

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

C

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

D

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

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

$$\frac{(x+4)^3(x-1)^4(x-2)}{x-2} > 0$$

A

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

B

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

C

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

D

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

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

$$\frac{(x+1)x^5(x-3)^4}{x+1} < 0$$

A

Interval	Valid
(-?, -1)	No
(-1, 0)	Yes
(0, ?)	No

B

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

C

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

D

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

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

$$\frac{(x+2)^4(x-1)^2(x-3)}{x+3} > 0$$

A

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

B

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

C

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

D

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