



Rational Function Inequalities - Expanded Quadratic over Binomial - Inequality Validity Chart

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

$$\frac{x^2 - 9}{x + 4} < 0$$

Interval	Valid
(-7, -4)	No
(-4, -3)	Yes
(-3, -1)	No
(-1, 3)	Yes
(3, 7)	Yes

Interval	Valid
(-7, -4)	No
(-4, -3)	Yes
(-3, -1)	No
(-1, 3)	Yes
(3, 7)	No

Interval	Valid
(-7, -4)	Yes
(-4, -3)	No
(-3, -1)	Yes
(-1, 3)	No
(3, 7)	Yes

D

Interval	Valid
(-7, -4)	No
(-4, -3)	Yes
(-3, -2)	No
(-2, 3)	Yes
(3, 7)	No

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

$$\frac{x^2 - 5x + 6}{x - 3} > 0$$

A

Interval	Valid
(-7, 2)	Yes
(2, 3)	No
(3, 7)	Yes

B

Interval	Valid
(-7, 2)	No
(2, 7)	Yes

C

Interval	Valid
(-7, -4)	Yes
(-4, 2)	No
(2, 7)	Yes

D

Interval	Valid
(-7, 2)	Yes
(2, 7)	No

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

$$\frac{x^2 - 3x - 4}{x - 4} > 0$$

A

Interval	Valid
(-7, -4)	Yes
(-4, -1)	No
(-1, 7)	Yes

B

Interval	Valid
(-7, -1)	Yes
(-1, 4)	No
(4, 7)	Yes

C

Interval	Valid
(-7, -1)	Yes
(-1, 7)	No

D

Interval	Valid
(-7, -1)	No
(-1, 7)	Yes

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

$$\frac{x^2 + 2x - 8}{x + 2} < 0$$

A

Interval	Valid
(-7, -4)	No
(-4, -3)	Yes
(-3, -2)	No
(-2, 2)	Yes
(2, 7)	No

B

Interval	Valid
(-7, -4)	No
(-4, -2)	Yes
(-2, -1)	No
(-1, 2)	Yes
(2, 7)	No

C

Interval	Valid
(-7, -4)	No
(-4, -2)	Yes
(-2, 2)	No
(2, 7)	Yes

D

Interval	Valid
(-7, -4)	Yes
(-4, -2)	No
(-2, 2)	Yes
(2, 7)	No

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

$$\frac{x^2 + 4x}{x - 4} > 0$$

A

Interval	Valid
(-7, -4)	Yes
(-4, -2)	No
(-2, 0)	Yes
(0, 4)	No
(4, 7)	Yes

B

Interval	Valid
(-7, -4)	No
(-4, 0)	Yes
(0, 4)	No
(4, 7)	Yes

C

Interval	Valid
(-7, -4)	Yes
(-4, -3)	No
(-3, 0)	Yes
(0, 4)	No
(4, 7)	Yes

D

Interval	Valid
(-7, -4)	Yes
(-4, 0)	No
(0, 4)	Yes
(4, 7)	No

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

$$\frac{x^2 + 4x + 3}{x + 3} < 0$$

A

Interval	Valid
(-7, -1)	Yes
(-1, 7)	No

B

Interval	Valid
(-7, -4)	No
(-4, -1)	Yes
(-1, 7)	No

C

Interval	Valid
(-7, -3)	No
(-3, -1)	Yes
(-1, 7)	No

D

Interval	Valid
(-7, -1)	No
(-1, 7)	Yes

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

$$\frac{x^2 + x}{x - 4} < 0$$

A

Interval	Valid
(-7, -1)	Yes
(-1, 0)	No
(0, 4)	Yes
(4, 7)	No

B

Interval	Valid
(-7, -4)	No
(-4, -1)	Yes
(-1, 0)	No
(0, 4)	Yes
(4, 7)	No

C

Interval	Valid
(-7, -3)	No
(-3, -1)	Yes
(-1, 0)	No
(0, 4)	Yes
(4, 7)	No

D

Interval	Valid
(-7, -1)	No
(-1, 0)	Yes
(0, 4)	No
(4, 7)	Yes

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

$$\frac{x^2 + 4x}{x} > 0$$

A

Interval	Valid
(-7, -4)	Yes
(-4, 0)	No
(0, 7)	Yes

B

Interval	Valid
(-7, -4)	No
(-4, 7)	Yes

C

Interval	Valid
(-7, -4)	Yes
(-4, -3)	No
(-3, 7)	Yes

D

Interval	Valid
(-7, -4)	Yes
(-4, 7)	No