Name

Rational Function Inequalities - Expanded Quadratic over Binomial - Intervals

1 On which set of open intervals does this rational function keep a constant sign?

$$\frac{x^2-16}{x-2}$$

A $(-\infty,-4)\cup(-4,-1)\cup(-1,2)\cup(2,4)\cup(4,\infty)$

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

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

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

2 On which set of open intervals does this rational function keep a constant sign?

$$\frac{x^2-x-6}{x-4}$$

A $(-\infty,-2)\cup(-2,-1)\cup(-1,3)\cup(3,4)\cup(4,\infty)$

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

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

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

3 On which set of open intervals does this rational function keep a constant sign?

$$\frac{x^2-4x+3}{x+4}$$

A $(-\infty,-4)\cup(-4,1)\cup(1,3)\cup(3,\infty)$

B $(-\infty,-4)\cup(-4,-2)\cup(-2,1)\cup(1,3)\cup(3,\infty)$

C $(-\infty,-4)\cup(-4,-3)\cup(-3,1)\cup(1,3)\cup(3,\infty)$

D $(-\infty,-4)\cup(-4,-1)\cup(-1,1)\cup(1,3)\cup(3,\infty)$

4 On which set of open intervals does this rational function keep a constant sign?

$$\frac{x^2+7x+12}{x+1}$$

A $(-\infty,-4)\cup(-4,-3)\cup(-3,-1)\cup(-1,\infty)$

B $(-\infty,-4)\cup(-4,-3)\cup(-3,-1)\cup(-1,1)\cup(1,\infty)$

C $(-\infty,-4)\cup(-4,-3)\cup(-3,-1)\cup(-1,0)\cup(0,\infty)$

D $(-\infty,-4)\cup(-4,-3)\cup(-3,-2)\cup(-2,-1)\cup(-1,\infty)$

5 On which set of open intervals does this rational function keep a constant sign?

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

A $(-\infty,-1)\cup(-1,0)\cup(0,4)\cup(4,\infty)$

B $(-\infty,-3)\cup(-3,-1)\cup(-1,0)\cup(0,4)\cup(4,\infty)$

C $(-\infty,-4)\cup(-4,-1)\cup(-1,0)\cup(0,4)\cup(4,\infty)$

D $(-\infty,-2)\cup(-2,-1)\cup(-1,0)\cup(0,4)\cup(4,\infty)$

6 On which set of open intervals does this rational function keep a constant sign?

$$\frac{x^2-2x-8}{x+3}$$

A $(-\infty,-3)\cup(-3,-2)\cup(-2,-1)\cup(-1,4)\cup(4,\infty)$

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

C $(-\infty,-3)\cup(-3,-2)\cup(-2,0)\cup(0,4)\cup(4,\infty)$

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

7 On which set of open intervals does this rational function keep a constant sign?

$$\frac{x^2+5x+6}{x+2}$$

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

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

C $(-\infty,-3)\cup(-3,-1)\cup(-1,\infty)$

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

8 On which set of open intervals does this rational function keep a constant sign?

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

A $(-\infty,-4)\cup(-4,-3)\cup(-3,-1)\cup(-1,2)\cup(2,\infty)$

B $(-\infty,-4)\cup(-4,-1)\cup(-1,2)\cup(2,\infty)$

C $(-\infty,-4)\cup(-4,-2)\cup(-2,-1)\cup(-1,2)\cup(2,\infty)$

D $(-\infty,-4)\cup(-4,-1)\cup(-1,0)\cup(0,2)\cup(2,\infty)$