

Determining Continuity

Find maximal open intervals where the function is two-sided continuous. List each discontinuity and classify it as removable, jump, or infinite.

1. Find intervals; identify and classify discontinuities.

$f(x) = -x - 1 + 2\left|x - \frac{5}{2}\right|$

Intervals: _____

Discontinuities / types: _____

2. Find intervals; identify and classify discontinuities.

$f(x) = \frac{2\cdot\left(x + \frac{1}{2}\right)}{\left(x + \frac{1}{2}\right)}$

Intervals: _____

Discontinuities / types: _____

3. Find intervals; identify and classify discontinuities.

$f(x) =$

2

$x + \frac{11}{2}$

$f(-3/2) = 2$

$x < -3/2$

$x > -3/2$

Intervals: _____

Discontinuities / types: _____

4. Find intervals; identify and classify discontinuities.

$f(x) = \left|x\right| + 4$

Intervals: _____

Discontinuities / types: _____

Determining Continuity

Find maximal open intervals where the function is two-sided continuous. List each discontinuity and classify it as removable, jump, or infinite.

5. Find intervals; identify and classify discontinuities.

$f(x) = -2 \cdot x^2 + 3 - \left|x + \frac{3}{2}\right|$

Intervals: _____

Discontinuities / types: _____

6. Find intervals; identify and classify discontinuities.

$f(x) = \frac{-\frac{1}{2} \cdot \left(x - \frac{3}{2}\right)}{\left(x - \frac{1}{2}\right)}$

Intervals: _____

Discontinuities / types: _____

7. Find intervals; identify and classify discontinuities.

$f(x) =$	$-1 \cdot x$	$x < -3/2$
	$-2 \cdot x - \frac{3}{2}$	$-3/2 < x < -1/2$
	$-x - 1$	$x > -1/2$

$f(-3/2) = \text{undefined}$

$f(-1/2) = 1/2$

Intervals: _____

Discontinuities / types: _____

8. Find intervals; identify and classify discontinuities.

$f(x) = -2 \cdot |x| + 4$

Intervals: _____

Discontinuities / types: _____