

## discontinuity

exercise 5

(a)

(b)

(C)

(d)

plenty more limit and continuity exercises in your tutorial...

## discontinuity

## exercise 5

Determine whether each function is continuous at the given x-values. Justify using the continuity test. If discontinuous, identify the type of discontinuity.

(a) 
$$f(x) = 3x^2 + x - 7$$
 at  $x = 1$ 

(b) 
$$f(x) = \frac{|2x|}{x}$$
 at  $x = 0$ 

(c) 
$$f(x) = \frac{x^2 - 4}{x + 2}$$
 at  $x = -2$ 

(d) 
$$f(x) = \frac{1}{3x^2}$$
 at  $x = 0$ 

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## continuity and differentiability