

# The Domain of Functions

Name \_\_\_\_\_

Class \_\_\_\_\_

Date \_\_\_\_\_

## A N S W E R S

1a \_\_\_\_\_

1b \_\_\_\_\_

2a \_\_\_\_\_

2b \_\_\_\_\_

3a \_\_\_\_\_

3b \_\_\_\_\_

4a \_\_\_\_\_

4b \_\_\_\_\_

**Find the domain of the functions.**

1. a.  $y = x^2 - 2x - 3$

b.  $y = x^2 + 4x + 3$

2. a.  $y = \frac{3x}{x^2 - 5x + 6}$

b.  $y = \frac{4x}{x^2 - x + 5}$

3. a.  $y = \sqrt{5x^2 - 6x + 1}$

b.  $y = \sqrt{3x^2 - 14x + 16}$

4. **Sketch graphs of the given functions and find their intersection point.**

a.  $y = x^2 - 3x - 4$  and  $y = \frac{1}{5}x - 1$

b.  $y = x^2 - 4x + 3$  and  $y = \frac{1}{4}x + 1$

A

# DOMAIN OF A FUNCTION

Name \_\_\_\_\_

Class \_\_\_\_\_

Date \_\_\_\_\_

## A N S W E R S

1a \_\_\_\_\_

1b \_\_\_\_\_

2a \_\_\_\_\_

2b \_\_\_\_\_

3a \_\_\_\_\_

3b \_\_\_\_\_

4a \_\_\_\_\_

4b \_\_\_\_\_

Find the domain of the following functions.

1. a.  $y = \sqrt{3x - 2x^2}$

b.  $y = \sqrt{2x^2 - 2}$

2. a.  $y = \sqrt[4]{3x - 2x^2 - 5}$

b.  $y = \sqrt[6]{2x^2 + 3 - 7x}$

3. a.  $y = \sqrt{7 - 2x} + \sqrt{x + 1}$

b.  $y = \sqrt{3x + 6} + \sqrt{5 - x}$

4. a.  $y = \frac{x}{9x^2 - 6x + 1}$

b.  $y = \frac{4x}{6x^2 - 7x + 1}$

# B

# DOMAIN OF A FUNCTION

Name \_\_\_\_\_

Class \_\_\_\_\_

Date \_\_\_\_\_

## ANSWERS

1a \_\_\_\_\_

1b \_\_\_\_\_

2a \_\_\_\_\_

2b \_\_\_\_\_

3a \_\_\_\_\_

3b \_\_\_\_\_

4a \_\_\_\_\_

4b \_\_\_\_\_

Find the domain of the following functions.

1. a.  $y = \frac{\sqrt{6-5x-x^2}}{x+3}$

b.  $y = \frac{\sqrt{3+x-2x^2}}{x-1}$

2. a.  $y = \frac{\sqrt{3x^2-x-14}}{2x+5}$

b.  $y = \frac{\sqrt{3x^2-4x-15}}{7-2x}$

3. a.  $y = \frac{\sqrt{3-5x-2x^2}}{10x}$

b.  $y = \frac{\sqrt{2-5x-3x^2}}{x^2}$

Find the domain of the following functions and draw their graphs.

4. a.  $y = \frac{x-4}{x^2-4x}$

b.  $y = \frac{2+x}{2x+x^2}$

C