

## AP Calculus Multiple Choice Questions - Chapter 1

1 Which of the following is an equation of the line through  $(-3, 4)$  with slope  $1/2$ ?

a  $y - 4 = 0.5(x + 3)$

b  $y + 3 = 0.5(x - 4)$

c  $y - 4 = -2(x + 3)$

d  $y - 4 = 2(x + 3)$

e  $y + 3 = 2(x - 4)$

	1.1
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2 Which of the following is an equation of the vertical line through  $(-2, 4)$ ?

a  $y = 4$

b  $x = 2$

c  $y = -4$

d  $x = 0$

e  $x = -2$

	1.1
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3 Which of the following is an equation of the line through  $(-2, -1)$  parallel to the line  $y = -3x + 1$ ?

a  $y = -3x + 5$

b  $y = -3x - 7$

c  $y = 0.33x - 0.33$

d  $y = -3x + 1$

e  $y = -3x - 4$

	1.1
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## AP Calculus Multiple Choice Questions - Chapter 1

1 Which of the following is the domain of

$$f(x) = \frac{x}{\sqrt{9-x^2}}$$

- a  $x \neq \pm 3$
- c  $[-3, 3]$
- e  $(3, \infty)$

- b  $(-3, 3)$
- d  $(-\infty, -3) \cup (3, \infty)$

	1.2a
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2 Which of the following is the range of

$$f(x) = 1 + \frac{1}{x-1}$$

- a  $(-\infty, 1) \cup (1, \infty)$
- c All Real Numbers
- e  $x \neq 0$

- b  $x \neq 1$
- d  $(-\infty, 0) \cup (0, \infty)$

	1.2a
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3 Which of the following is the domain of

$$f(x) = 1 + \frac{1}{x-1}$$

- a  $(-\infty, 1) \cup (1, \infty)$
- c All Real Numbers
- e  $x \neq 0$

- b  $x \neq 1$
- d  $(-\infty, 0) \cup (0, \infty)$

	1.2a
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## AP Calculus Multiple Choice Questions - Chapter 1

1 Determine whether the following function is even, odd, or neither

- a Even
- c Neither

- b Odd
- d Can't Be Determined

$$f(x) = x + x^2$$

	<b>1.2b</b>
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2 Determine whether the following function is even, odd, or neither

- a Even
- c Neither

- b Odd
- d Can't Be Determined

$$f(x) = x + x^3$$

	<b>1.2b</b>
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2 Determine whether the following function is even, odd, or neither

- a Even
- c Neither

- b Odd
- d Can't Be Determined

$$f(x) = \frac{1}{x^2 - 1}$$

	<b>1.2b</b>
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## AP Calculus Multiple Choice Questions - Chapter 1

1 Find the domain of the following function

a  $(-\infty, 3)$

c  $(-\infty, -2)$

$$y = -2^x + 3$$

b  $(-2, \infty)$

d All real numbers

	<b>1.3a</b>
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2 Find the range of the following function

a  $(-\infty, 3)$

c  $(-\infty, -2)$

$$y = -2^x + 3$$

b  $(-2, \infty)$

d All real numbers

	<b>1.3a</b>
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3 Find the range of the following function

a  $(-\infty, 3)$

c  $(-\infty, -2)$

$$y = 3e^{-x} - 2$$

b  $(-2, \infty)$

d All real numbers

	<b>1.3a</b>
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## AP Calculus Multiple Choice Questions - Chapter 1

1 Which of the following is a cartesian equation for the provided parameterization curve?

$$x = 3t \quad y = 9t^2 \quad t = \text{All Real Numbers}$$

a  $y = 2x$

b  $y = 3x^2$

c  $y = x^2$

d  $y = 3x$

	1.4
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2 Which of the following is a cartesian equation for the provided parameterization curve?

$$x = \cos(t) \quad y = \sin(t) \quad 0 \leq t \leq \pi$$

a  $x^2 + y^2 = 4$

b  $x^2 + y^2 = 1$

c  $x^2 + y^2 = 0$

d  $x^2 = y^2$

	1.4
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3 Which of the following is a cartesian equation for the provided parameterization curve?

$$x = 2t - 5 \quad y = 4t - 7 \quad t = \text{All Real Numbers}$$

a  $y = 2x + 3$

b  $y = 2x - 3$

c  $y = 3x - 2$

d  $y = 3x + 2$

	1.4
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## AP Calculus Multiple Choice Questions - Chapter 1

1 Which of the following is the inverse of  $f(x) = 3x - 2$ ?

a  $g(x) = \frac{1}{3x - 2}$

c  $g(x) = 3x - 2$

e  $g(x) = \frac{x + 2}{3}$

b  $g(x) = x$

d  $g(x) = \frac{x - 2}{3}$

2 Which of the following is the inverse of  $f(x) = 1 / x$ ?

a  $g(x) = x$

c  $g(x) = 1 / x$

e  $g(x) = 0.1x$

b  $g(x) = 1 + x$

d  $g(x) = 1 - x$

3 What is the composite of a function with its inverse?

a 1

c 100

e 0

b  $10x$

d  $x$

	1.5a
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	1.5a
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	1.5a
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## AP Calculus Multiple Choice Questions - Chapter 1

1 Determine the domain of the following function

- a  $(3, \infty)$
- c  $(-\infty, 3)$

$$f(x) = 2 \ln(3 - x) - 4$$

- b  $(-\infty, 2)$
- d All real numbers

	1.5c
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2 Determine the range of the following function

- a  $(3, \infty)$
- c  $(-\infty, 3)$

$$f(x) = 2 \ln(3 - x) - 4$$

- b  $(-\infty, 2)$
- d All real numbers

	1.5c
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3 Determine the domain of the following function

- a  $(-2, \infty)$
- c  $(-\infty, 3)$

$$f(x) = -3 \log(x + 2) + 1$$

- b  $(-\infty, 2)$
- d All real numbers

	1.5c
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# AP Calculus Multiple Choice Questions - Chapter 1

1 Evaluate  $\sin(90^\circ)$  exactly

a  $\frac{\sqrt{2}}{2}$

c  $\frac{\sqrt{3}}{2}$

e 0

b  $\frac{3}{2}$

d 1

	<b>1.6a</b>
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2 Evaluate  $\cos \frac{5\pi}{6}$  exactly

a  $\frac{\sqrt{2}}{2}$

c  $\frac{\sqrt{3}}{2}$

e 0

b  $-\frac{\sqrt{3}}{2}$

d  $-\frac{\sqrt{2}}{2}$

	<b>1.6a</b>
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3 Evaluate  $\tan \frac{\pi}{3}$  exactly

a  $\sqrt{3}$

c  $\frac{\sqrt{3}}{2}$

e 1

b  $-\sqrt{3}$

d  $-\frac{\sqrt{3}}{2}$

	<b>1.6a</b>
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## AP Calculus Multiple Choice Questions - Chapter 1

1 Solve the equation in the specified interval

a -1.190, 1.190

c -4.332, 4.332

$$\tan x = 2.5$$

b 1.190, 4.332

d 1.190, 2.761

$$0 < x < 2\pi$$

	<b>1.6d</b>
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2 Solve the equation in the specified interval

a 2.34, 5.49

c 5.49, 8.629

$$\cos x = -0.7$$

b 9.211, 10.220

d 8.629, 10.220

$$2\pi < x < 4\pi$$

	<b>1.6d</b>
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3 Solve the equation in the specified interval

a -1.911, 1.911

c -0.544, 0.544

$$\sec x = -3$$

b -1.232, 1.232

d -0.977, 0.977

$$-\pi < x < \pi$$

	<b>1.6d</b>
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