

Section 3.1

- 1a) $\{(-2,1) (-2,3) (0,-3) (1,4) (3,1)\}$ 1b) Domain: $\{-2, 0, 1, 3\}$
 1c) Range: $\{-3, 1, 3, 4\}$ 1d) y is not a function of x
 2a) $\{(1, a) (2, d) (3, b) (3, c)\}$ 2b) Domain $\{1, 2, 3\}$
 2c) Range: $\{a, b, c, d\}$ 2d) y is not a function of x
 3a) $\{(1, D)(2, B) (3, C) (4, A)\}$ 3b) Domain: $\{1, 2, 3, 4\}$
 3c) Range: $\{A, B, C, D\}$ 3d) y is a function of x
 4a) $\{(-1, 2) (0, 2) (1, -3) (2, -2) (8, 3)\}$ 4b) Domain: $\{-1, 0, 1, 2, 8\}$
 4c) Range: $\{-3, -2, 2, 3\}$ 4d) y is a function of x
 5a) Domain: $\{-2, 0, 1, 3, 5, 6\}$ Range: $\{-4, 0, 1, 5\}$ 5b) y is a function of x
 6a) Domain: $\{-5, 2, 4, 7\}$ Range: $\{1, 3, 4, 6\}$ 6b) y is function of x
 7a) Domain: $\{-5, 0, 4\}$ Range: $\{1, 2, 3, 6\}$ 7b) y is not a function of x
 8a) Domain: $\{-5, 0, 1, 3\}$ Range: $\{-3, 2, 4, 6\}$ 8b) y is not a function of x

<p>9) Find the following: $f = \{(3, -2), (5, 6), (7, 3), (1, -2), (4, 1), (6, 7)\}$</p> <p>a) The domain of f $\{1, 3, 4, 5, 6, 7\}$ b) The range of the f $\{-2, 1, 3, 6, 7\}$ c) $f(3) = -2$ d) $f(1) = -2$ e) all values of x such that $f(x) = -2$ $x = 1, 3$ f) all values of x such that $f(x) = 6$ $x = 5$</p>	<p>10) Find the following: $f = \{(1, -3), (2, -3), (-4, 2), (5, -2), (-3, 5), (6, 7)\}$</p> <p>a) The domain of f $\{-4, -3, 1, 2, 5, 6\}$ b) The range of the f $\{-3, -2, 2, 5, 7\}$ c) $f(2) = -3$ d) $f(5) = -2$ e) all values of x such that $f(x) = -3$ $x = 1, 2$ f) all values of x such that $f(x) = 2$ $x = -4$</p>
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<p>11) Find the following: $g = \{(9, 2) (1, 9) (4, 1) (2, 4) (6, 1)\}$</p> <p>a) The domain of g $\{1, 2, 4, 6, 9\}$ b) The range of the g $\{1, 2, 4, 9\}$ c) $g(9) = 2$ d) $g(4) = 1$ e) all values of x such that $g(x) = 9$ $x = 1$ f) all values of x such that $g(x) = 1$ $x = 4, 6$</p>	<p>12) Find the following: $g = \{(5, -3) (-3, 2) (2, -3) (1, 2) (6, 1)\}$</p> <p>a) The domain of g $\{-3, 1, 2, 5, 6\}$ b) The range of the g $\{-3, 1, 2\}$ c) $g(1) = 2$ d) $g(-3) = 2$ e) all values of x such that $g(x) = -3$ $x = 5, 2$ f) all values of x such that $g(x) = 1$ $x = 6$</p>
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<p>13) Given the graph of $f(x)$, find the following:</p> <p>a) The domain of f $\{-1, 1, 2, 4, 5\}$ b) The range of the f $\{-3, 1, 2\}$ c) $f(2) = -3$ d) $f(1) = 2$ e) all values of x such that $f(x) = 2$ $x = -1, 1$ f) all values of x such that $f(x) = -3$ $x = 2, 5$</p>	<p>14) Given the graph of $f(x)$, find the following:</p> <p>a) The domain of f $\{-2, 1, 3, 4, 7\}$ b) The range of the f $\{-3, 1, 3, 7\}$ c) $f(1) = -3$ d) $f(3) = 7$ e) all values of x such that $f(x) = 3$ $x = -2, 4$ f) all values of x such that $f(x) = 1$ $x = 7$</p>
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<p>15) Given the graph of $g(x)$, find the following:</p> <p>a) The domain of g $\{-5, -3, 1, 2, 4\}$ b) The range of the g $\{-5, -3, 2, 4\}$ c) $g(2) = -5$ d) $g(4) = -3$ e) all values of x such that $g(x) = 4$ $x = -5$ f) all values of x such that $g(x) = -5$ $x = 2$</p>	<p>16) Given the graph of $g(x)$, find the following:</p> <p>a) The domain of g $\{-3, 0, 1, 2, 5\}$ b) The range of the g $\{-3, 0, 2, 3\}$ c) $g(-3) = 2$ d) $g(0) = 3$ e) all values of x such that $g(x) = 0$ $x = 2, 5$ f) all values of x such that $g(x) = 2$ $x = -3$</p>
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<p>17) Given the graph of $g(x)$, find the following:</p> <p>a) $g(3) = 6$ b) $g(-3) = 0$ c) all values of x such that $g(x) = 3$ $x = 0, 6$ d) all values of x such that $g(x) = 0$ $x = -3$</p>	<p>18) Given the graph of $g(x)$, find the following:</p> <p>a) $g(0) = -4$ b) $g(-4) = 4$ c) all values of x such that $g(x) = -4$ $x = 0$ d) all values of x such that $g(x) = 0$ $x = -2, 2$</p>
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19) Given the graph of $h(x)$, find the following:

- a) $h(-1) = -5$
- b) $h(2) = 4$
- c) all values of x such that $h(x) = -5$ $x = -1, 5$
- d) all values of x such that $h(x) = 0$ $x = 0, 4$

20) Given the graph of $h(x)$, find the following:

- a) $h(0) = 0$
- b) $h(4) = 0$
- c) all values of x such that $h(x) = -4$ $x = 2$
- d) all values of x such that $h(x) = 0$ $x = 0, 4$