

Chapter 4

MATH MADE
Easy

ANSWER SHEET

- 4-1a** 1) continuous 2) discrete (does not include decimal numbers) 3) continuous 4) discrete (does not include irrational numbers) 5) discrete

- 4-1b** 1) continuous 2) continuous 3) continuous 4) discrete (does not include 0 and negative numbers) 5) continuous between 15 and 20 hours

- 4-2a** 1) $\frac{4}{5}$ 2) $\frac{3}{2}$ 3) 0 4) 3 5) $\frac{3}{4}$

- 4-2b** 1) 1 2) $\frac{1}{2}$ 3) -5 4) $y = 2x - 1$ 5) (2, -4) and (0, 3)

- 4-3a** 1) $x_i: (-3, 0)$
 $y_i: (0, 3)$ 2) $x_i: (0, 0)$
 $y_i: (0, 0)$ 3) $x_i = (-\frac{5}{2}, 0), y_i = (0, \frac{5}{3})$ 4) $x_i: (0, 0)$
 $y_i: (0, 0)$ 5) $x_i: (6, 0)$
 $y_i: (0, -4)$

- 4-3b** 1) $x_i: (-\frac{2}{3}, 0)$ $y_i: (0, -2)$ 2) $x_i: (9, 0)$ $y_i: (0, \frac{9}{2})$ 3) $x_i: (\frac{8}{5}, 0)$ $y_i: (0, 8)$ 4) $x_i: (\frac{3}{2}, 0)$ $y_i: (0, -6)$ 5) $x_i: (14, 0)$ $y_i: (0, \frac{8}{3})$

- 4-4a** 1) \$2400 2) \$2000, her base pay only 3) There is none* 4) .05, the % in addition to the base pay 5) \$160,000

- 4-4b** 1) \$325 2) \$500, the maximum value of the card 3) 20, the # of items Amy can buy 4) -25, a decrease of \$25 per item 5) 20

- 4-5a** 1) $y = 2x - 2$ 2) $y = -\frac{3}{5}x + \frac{13}{5}$ 3) $y = -\frac{5}{2}x + 4$ 4) $y = -2x + 5$ 5) $y = -\frac{1}{5}x - \frac{1}{5}$

- 4-5b** 1) $y = 5x - 4$ 2) $y = -\frac{3}{5}x - \frac{1}{5}$ 3) $y = -2x - \frac{24}{5}$ 4) $y = -\frac{7}{38}x + \frac{73}{38}$ 5) $y = \frac{1}{2}x + \frac{11}{2}$

- 4-6a** 1) $7x - 2$ 2) $4x - 3$ 3) $-10x + 20$ 4) $-2x - 7$ 5) $-9x - 12$

- 4-6b** 1) $2x + 2$ 2) $-8x + 12$ 3) $-6x - 21$ 4) 20 5) $2x + 3y + 4$

- 4-7a** 1) $y^{-1} = \frac{x}{3}$ 2) $y^{-1} = \frac{x+1}{2}$ 3) $F^{-1}(x) = \frac{x-2}{3}$ 4) $g^{-1}(x) = \frac{3}{4}(x+1)$ 5) $y^{-1} = \frac{7}{5}x + \frac{7}{10}$

- 4-7b** 1) $F^{-1}(x) = x$ 2) $y^{-1} = 2x$ 3) $y^{-1} = -\frac{1}{2}x + 1$ 4) $g^{-1}(x) = \frac{(x+3)}{5}$ 5) $y^{-1} = \frac{3}{2}x - \frac{9}{2}$

- 4-8a** 1) yes 2) yes 3) yes 4) no 5) no

- 4-8b** 1) yes 2) no 3) not necessarily 4) yes 5) yes

*since she is guaranteed to make \$2000