

$$i(x) = 3x + x + x + x$$

$$18 = 3x + x + x + x$$

$$\frac{18}{6} = \frac{6x}{6}$$

$$3 = x$$

A 4. $h(x) = 151$
 $h(x) = 3(x-3)^2 + 4$
 $151 = 3(x-3)^2 + 4$
 $147 = 3(x-3)^2$
 $\frac{147}{3} = \frac{3(x-3)^2}{3}$
 $49 = (x-3)^2$
 $7 = x-3$
 $10 = x$

D 5. $h(7) - g(i(2))$
 $52 - 23$
 $\underline{29}$

$h(x) = 3(x-3)^2 + 4$ $h(7) = 3(7-3)^2 + 4$ $h(7) = 3(4)^2 + 4$ $h(7) = 3(16) + 4$ $h(7) = 48 + 4$ $h(7) = 52$	$i(x) = 3x + x + x + x$ $i(2) = 3(2) + 2 + 2 + 2$ $i(2) = 6 + 2 + 2 + 2$ $i(2) = 12$	$g(x) = \frac{4x-2}{2}$ $g(2) = \frac{4(2)-2}{2}$ $= \frac{8-2}{2}$ $= \frac{6}{2}$ $= 3$
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a) $x \in \mathbb{R}$ | $y \geq -2, y \in \mathbb{R}$ | F

b) $-4 \leq x \leq 4, x \in \mathbb{R}$ | $-2 \leq y \leq 5, y \in \mathbb{R}$ | NF

c) $-3 \leq x \leq 4, x \in \mathbb{I}$ | $-1 \leq y \leq 6, y \in \mathbb{I}$ | F

7. Rate of Change | a) $\frac{3}{2}$ | b) $-\frac{4}{2} = -2$ | c) $\frac{3}{1}$
 Initial Amount | $\frac{3}{3}$ | $\frac{6}{6}$ | $-\frac{3}{-3}$
 Equation | $y = mx + b$ | $y = mx + b$ | $y = mx + b$
 $y = \frac{3}{2}x + 3$ | $y = -2x + 6$ | $y = 3x - 3$

8. a) Jaden started at zero.

b) Domain: $\{0 \leq x \leq 2800, x \in \mathbb{R}\}$
 Range: $\{0 \leq y \leq 6000, y \in \mathbb{R}\}$

c) Rate of change = $\frac{\text{rise}}{\text{run}} = \frac{6000}{2800}$
 $= 2.14 \text{ m/revolutions}$
 Jaden travels 2.14m for every revolution of the tire.

d) $y = mx + b$

$y = 4x - 800$
 $y = 4(221) - 800$
 $y = 884 - 800$
 $y = 84$

You would make \$84 by selling 221 hats.

$y = 4x - 800$
 $1200 = 4x - 800$
 $2000 = 4x$
 $\frac{2000}{4} = \frac{4x}{4}$
 $500 = x$

You would need to sell 500 hats.

10. a) $4, 3$
 $4, 2$
 $4, 1$
 $4, 0$

Nonfunction

b) $2, 4$
 $-2, 4$
 $3, 9$
 $-3, 9$

function

c) $2, 8$
 $3, 12$
 $4, 16$
 $5, 20$

function

d) $5, 5$
 $5, -5$
 $-5, 5$
 $-5, -5$

Nonfunction

a) How far was Joseph when she started her bicycle trip?

b) Write the domain and range.

c) Determine the rate of change. What does it represent?

d) Write the equation.

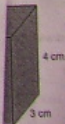
a) What is the start up cost (initial amount)?

b) What is the rate of change?

c) If 221 baseball caps were sold, how much profit would be made?

d) How many baseball caps would you need to sell to make a profit of \$1200.00?

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Use Isomet

