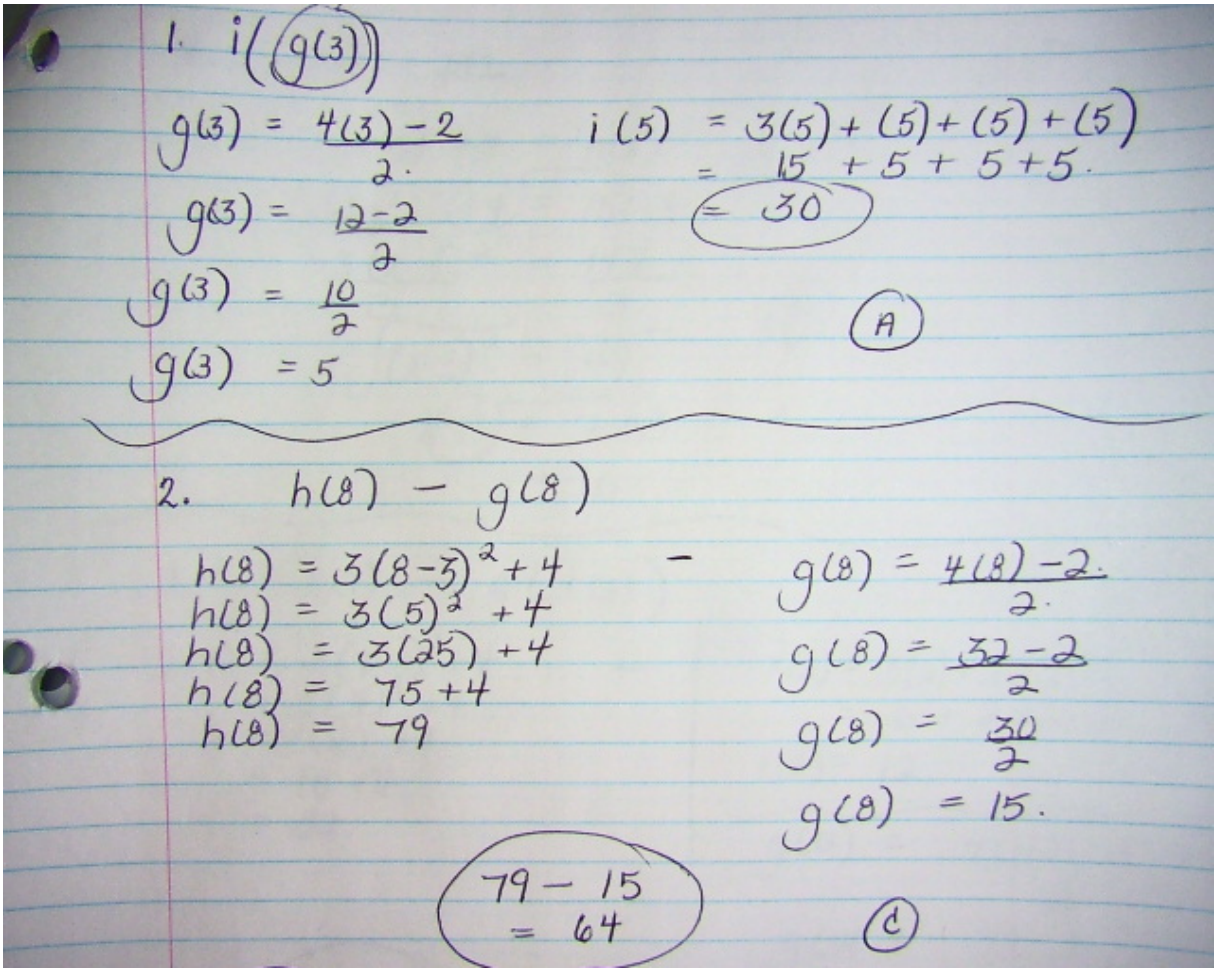


1. $i(g(3))$

$g(3) = \frac{4(3)-2}{2}$

$g(3) = \frac{12-2}{2}$

$g(3) = \frac{10}{2}$

$g(3) = 5$

$i(5) = 3(5)+(5)+(5)+(5)$

$= 15+5+5+5$

$= 30$

(A)

2. $h(8) - g(8)$

$h(8) = 3(8-3)^2+4$

$h(8) = 3(5)^2+4$

$h(8) = 3(25)+4$

$h(8) = 75+4$

$h(8) = 79$

$- \quad g(8) = \frac{4(8)-2}{2}$

$g(8) = \frac{32-2}{2}$

$g(8) = \frac{30}{2}$

$g(8) = 15.$

$79 - 15 = 64$

(C)

$79 - 15 = 64$ (C)

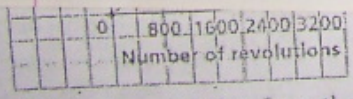
3. $i(x) = 18$

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

$18 = 3x + x + x + x$ (B)

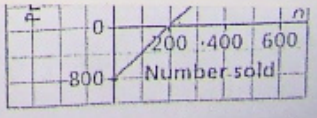
$\frac{18}{6} = \frac{6x}{6}$

$3 = x$

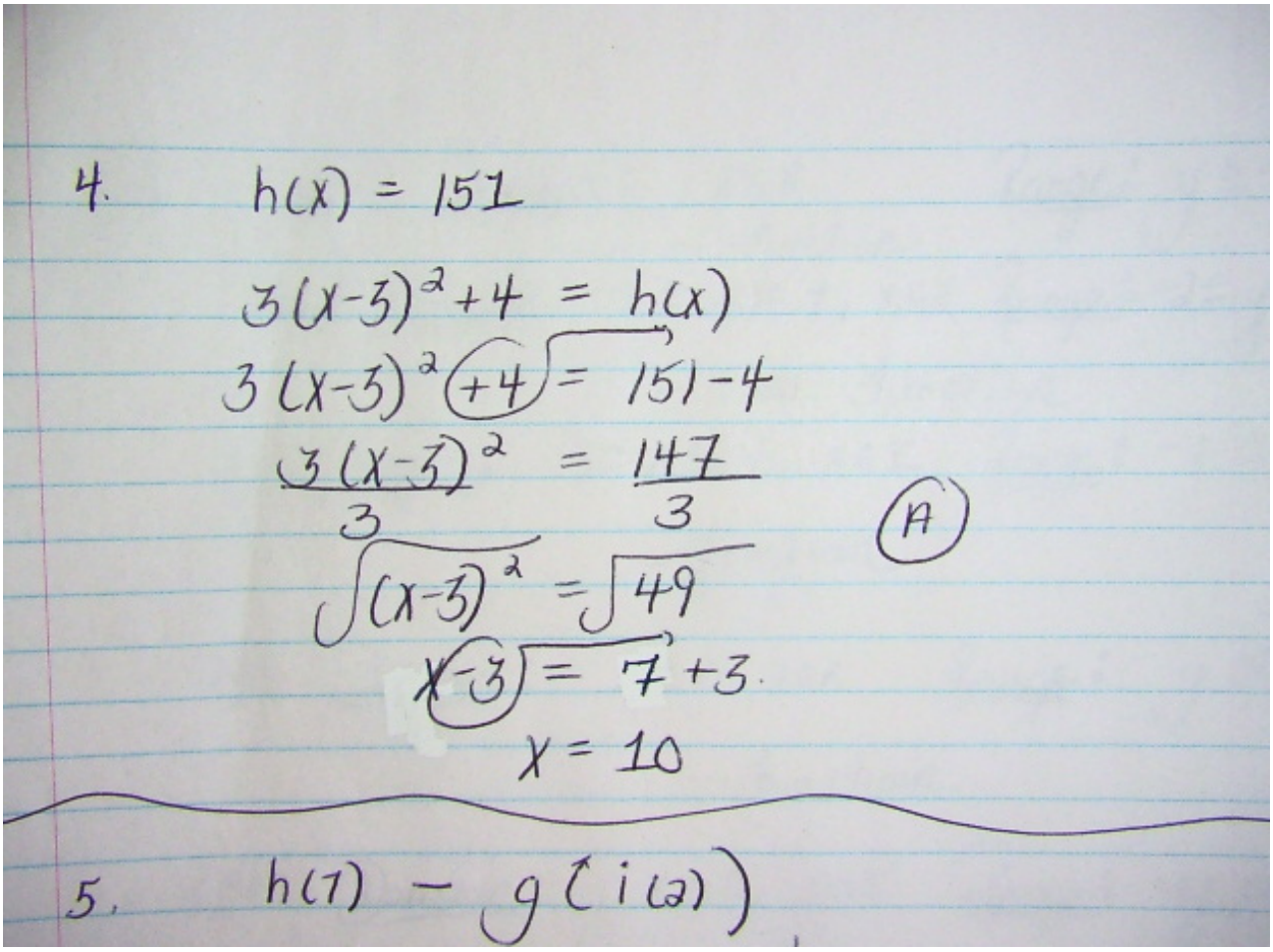


a) How far was Jadan from the lookout when she started her bicycle trip?

b) Write the domain and range.



a) What is the start up cost (initial



4. $h(x) = 151$

$3(x-3)^2 + 4 = h(x)$

$3(x-3)^2 + 4 = 151 - 4$

$\frac{3(x-3)^2}{3} = \frac{147}{3}$

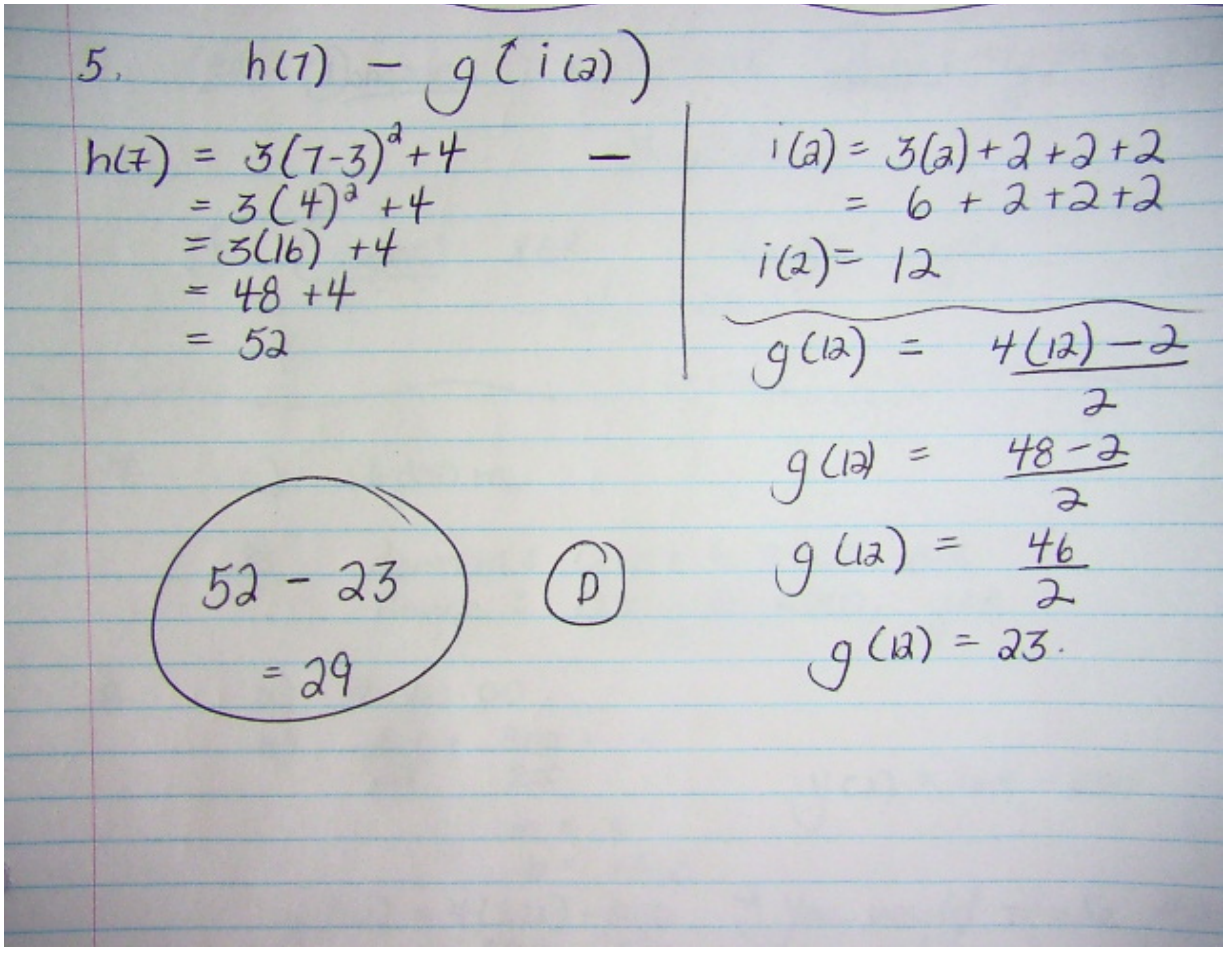
$\sqrt{(x-3)^2} = \sqrt{49}$

$x - 3 = 7 + 3$

$x = 10$

(A)

5. $h(7) - g(i(2))$


5. h(7) − g(i(2))
h(7) = 3(7−3)² + 4
= 3(4)² + 4
= 3(16) + 4
= 48 + 4
= 52
52 − 23
= 29
D
i(2) = 3(2) + 2 + 2 + 2
= 6 + 2 + 2 + 2
i(2) = 12
g(12) = 4(12) − 2 / 2
g(12) = 48 − 2 / 2
g(12) = 46 / 2
g(12) = 23.

6. a) Domain: $x \in R$ Range: $y \geq -2$, $y \in R$.
- Function.

b) Domain: $-4 \leq x \leq 4$, $x \in R$ Range: $-2 \leq y \leq 5$, $y \in R$.
- Non Function

(c) Domain: $-3 \leq x \leq 4$, $x \in I$ Range: $-1 \leq y \leq 6$, $y \in I$
- Function.

(d) Domain: $x \geq 0$, $x \in R$. Range: $y \geq 3$, $y \in R$.
- Function.

(e) Domain: $x \geq 0$, $x \in R$ Range: $y \leq 6$, $y \in R$.
- Function

(f) Domain: $x \in R$. Range: $y \in R$
- Function

- Function

7. a) 6000 m

b) domain: $0 \leq x \leq 2800$, $x \in R$.
Range: $0 \leq y \leq 6000$, $y \in R$.

8. a) $800.00

b) $\frac{\Delta y}{\Delta x} = \frac{800}{200} = 4$

$y(x) = 4x - 800$

$m = 4$

$b = -800$

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

* You would make $84.00 in profit.

8. c) $y(x) = 4x - 800$

$+800 \quad +800$

$1200 = 4x - 800$

$\frac{2000}{4} = \frac{4x}{4}$

$500 = x$

* You would need to sell 500 baseball caps.

9. a) Non function
b) Function
c) Function
d) Non function.

10 a) Graph A

b) many different answers.

11. a) Domain: {x: | 13, 14, 15, 16, 17}
Range: {y: | 159, 161, 165, 168, 170, 174, 176}

Non function.

b) Domain: {x: | 8:00, 10:00, 12:00, 14:00, 16:00, 18:00}
Range: {y: | 2, 5, 10, 20, 25}
Function

12. a) From section C-D. It lasted 2 minutes.
b) During sections A-B and E-F.
c) The Bus driver was putting on their brakes and coming to a gradual stop.
d) During section A-B they were travelling 10m/s.

13.

a) During section B-C.
b) 115 minutes.
c) Josh was 4km from home after 30 minutes.