

Even more Lesson 3

1) a) continuous

b) absolute value

c) $y = a|x-h|+k$

d) decreasing from $-\infty$ to 2
increasing from 2 to ∞

e) absolute minimum (2, -6)

f) domain: $x \leq 4$

range: $y \geq -6$

2) a) continuous

b) quadratic

c) $y = ax^2 + bx + c$

d) decreasing from $-\infty$ to 0
increasing from 0 to ∞

e) absolute minimum (0, -10)

f) domain: all real #s

range: $y \geq -10$

4) a) discrete

b) absolute value

c) $y = a|x-h|+k$

d) increasing from $-\infty$ to 0
decreasing from 0 to ∞

e) absolute maximum (0, 4)

f) domain: $\{ -8, -6, -4, \dots, 6, 8 \}$

range: $\{ -4, -2, 0, 2, 4 \}$

5) a) continuous

b) linear

c) $y = mx + b$

d) increasing

e) absolute minimum (-4, -4)

f) domain: $x \geq -4$

range: $y \geq -4$

6) a) continuous

b) exponential

c) $y = a \cdot b^x$

d) decreasing

e) neither

f) domain: all real #s

range: $y > -6$

7) a) continuous

b) quadratic

c) $y = ax^2 + bx + c$

d) increasing from -9 to 0
decreasing from 0 to 9

e) absolute maximum (0, 4)

f) domain: $-9 \leq x \leq 9$

range: $-6 \leq y \leq 4$

Even more Lesson 3, cont.

8) a) ~~discrete~~

b) linear

c) $y = mx + b$

d) decreasing

e) absolute minimum $(4, -10)$

absolute maximum $(-12, 20)$

f) domain: $\{-12, -4, 4\}$

range $\{-10, 5, 20\}$

9) a) continuous

b) exponential

c) $y = a \cdot b^x$

d) increasing

e) neither

f) domain: all real #s

range: $y > -6$

10) e) neither

f) domain: $x \leq 8$

range: $y \leq 8$

11) e) absolute maximum $(10, 20)$

f) domain: $0 \leq x \leq 15$

range: $-15 \leq y \leq 20$

12) d) increasing from -2 to -4
constant from -4 to 4
decreasing from 4 to 8

d) increasing from 0 to 10
decreasing from 10 to 15

12) a) absolute minimum $(1, -12)$

f) domain: all real #s

range: $y \geq -12$

d) constant from $-\infty$ to -1
decreasing from -1 to 1
increasing from 1 to ∞