

Chapter 2

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1 2.1

p.110 1-6 (TWO)

1. A town's population has been growing linearly. In 2003, the population was 45,000, and the population has been growing by 1700 people each year. Write an equation, $P(t)$, for the population t years after 2003.

$$P(t)=45,000+1700t$$

This problem was very easy. It was all stuff that I already learned how to do in high school.

3. Sonya is currently 10 miles from home, and is walking further away at 2 miles per hour. Write an equation for her distance from home t hours from now

$$P(t)=10+2t$$

p.110 7-16 (TWO) increasing or decreasing function

7. $f(x) = 4x + 3$

The positive slope means increasing

I was a bit confused at first then I asked for help and once I knew what was going on it was very easy. 9. $a(x) = 5 - 2x$

the negative slope means decreasing

It was pretty easy to figure out p.110 17-22 (ONE) find slope with given points

17. (2,4) and (4,10)

slope formula is $y_2 - y_1/x_2 - x_1$

10-4/4-2=6/2=3 This was pretty easy since I learned it in high school p.111 25-31 (ONE)

31. Terry is skiing down a steep hill. Terry's elevation, $E(t)$, in feet after t seconds is given by $E(t) = 3000 - 70t$. Write a complete sentence describing Terry's starting elevation and how it is changing over time.

Terry starts off at 3,000 feet and for every second goes downhill 70 feet.

This was pretty easy, I just used my basic problem solving skills

2 2.2

p.125 7-8(ONE)

7. x-intercept=(4,0) y-intercept=(0,-2)

This one was easy p.125 9-10 (ONE)

9. y-intercept=(0,7) slope=-3/2 $y=-3/2x+7$

This was easy because I have learned it before

p.125 11-12 (ONE)

11. Make a line with (-6,-2), (6,-6)

This problem was quick and easy

p.125 13-22 (ONE)

13. $f(x)=-2x-1$

This one was really easy

p.126 23-24 (ONE)

24. a. $g(x)=3(x-1)+3$

b. slope=3

c. vertical intercept=3

This one is starting to get repetitive

p.126 29-34 (ONE)

30. $y=2x+4$

vertical=4 horizontal=-2

The vertical one was easy but the horizontal one was more confusing at first

p.127 35-40 (ONE)

37. line 1 (2,3) and (4,-1) slope=-2 line 2 (6,3) and (8,5) slope=1

This one was very easy and quick

p.127 41-46 (ONE)

41. parallel to $y=-5x-3$ going through (2,12) is $y=-5x-2$

I learned this in high school

3 2.3

p.137-139 1-12 (TWO)

1a. $2004=1001$ $2008=1697$

$1697-1001=696$ population difference

b. $2008-2004=4$ years

c. $696/4=174$ rise a year

d. $1001-696=305$ in 2000

e. $P=305+174t$

f. $2008=1697$ $174*3=522$ $1697+522=2219$ in 2011

This was extremely tedious

2. $2003=1431$ $2007=2134$

a. $2134-1431=703$ population change

b. $2007-2003=4$ years

c. $703/4=175.75$ a year

d. $2003=1431$ $175.75*3=527.25$ $1431-527.25=903.75$

e. $P=903.75+175t$

f. $P=903.75+175.75*14=3364.25$ in 2014

also extremely tedious p.139 13-18 (TWO)

13. $1/2bh$ $y=9-6/7x$

perpendicular that goes through origin is $y=-7/6x$

area $9 \times 4,447 = 40.023 \times 0.5 = 20.0115$

I learned this stuff in high school it was easy. 14. $y = 12 - 1/3x$

perpendicular line is $y = 3x$

area is $12 \times 3.6 = 43.2 \times 0.5 = 21.6$

It was very easy

4 2.4

p.147 1-2 (ONE) this was quick and easy

p.147 5-6 (ONE)

This was quick and easy

6. $f(x) = -1.97892857142857x + 51.9015476190476$ $r = 0.99139881070441$

I was kind of confused on how to go about it and then I asked for help and it became clearer.

p.148 7-8(ONE)

7. $y = ax + b$

$a = -1.341$

$b = 32.234$

$y = -1.341 \times 11 + 32.234 = 17.483$ situps

I had a bit of an issue finding what the concept was but I asked and it was simple.

p.148 13-14

13. It exceeds 35 percent in 2011

very easy

5 2.5

p.156 5-10 (TWO)

5. $y = -x - 1$

making the graph was very easy

7. $y = 2 - x + 3$

making the graph was extremely easy

p.156 11-16 (TWO)

11. $-5x - 2 = 11$

$5x - 2 = 11$

(+2 on both sides) $5x = 13$

(divide both sides by 5) $x = 2.6$

$5x - 2 = -11$

(+2 on both sides) $5x = -9$

(divide both by 5) $x = -1.8$

This was a bit confusing because you have to do the positive and the negative

13. $2 - 4x = 7$

(divide both sides by 2) $-4x = 3.5$

$4x = 3.5$

(-4 on both sides) $-x = -0.5$
(divide both sides by -1) $x = 0.5$

$$4 - x = -3.5$$

(-4 on both sides) $-x = -7.5$

(divide both sides by -1) $x = 7.5$

easy but tedious

p.157 17-20 (TWO)

17. $f(x) = 2 - x + 1 - 10$

$$0 = 2 - x + 1 - 10$$

(+10 on both sides) $10 = 2 - x + 1 -$

(/2 in both sides) $5 = x + 1$

(-1 on both sides) $x = 4$

$$x + 1 = -5$$

(-1 on both sides) $x = -6$

$$x = 4 \text{ or } -6$$

$$2 - 0 + 1 - 10$$

$$2(1) - 10 = -8$$

$$y = -8$$

It was just very tedious

20. $F(x) = -2 - x + 1 - 6$ $0 = -2 - x + 1 - 6$

(-6 on both sides) $-6 = -2 - x + 1 -$

(/-2 on both sides) $3 = x + 1$

(-1 on both sides) $x = 2$

$$-3 = x + 1$$

(-1 on both sides) $x = -4$

$$x = 2 \text{ or } -4$$

$$-2 - 0 + 1 - 6$$

$$-2(1) + 6 = 4$$

$$y = 4$$

The concept was very easy

p.157 21-26 (TWO)

21. $|x + 5| < 6$

$$x < 1$$

$$|x + 5| > -6$$

$$x > 11$$

$$-11 < x < -1$$

The only issue I had here was making the finished product have the arrows

22. $|x - 3| < 7$

$$x < 10$$

$$x - 3 > -7$$

$$x > -4$$

$$-4 < x < 10$$

This was quick and easy but it was tedious getting the arrows into the final product