

2.4 Representing Functions

3) Answers will vary.

5)

- a) Let C = total cost (in \$).
Let b be the number of boxes delivered.
 $C = 10b + 25$
- b) Independent variable = b
Dependent variable = C

c)

No. Boxes	Total Cost (\$)
0	25
2	45
4	65
6	85
8	105

d)

No. Boxes	Total Cost (\$)
10	125
20	225
30	325
40	425
50	525
60	625
70	725

7)

- a) $Y_1 = 10X + 25$
c) If $X = 35$, then $Y = 375$.

9)

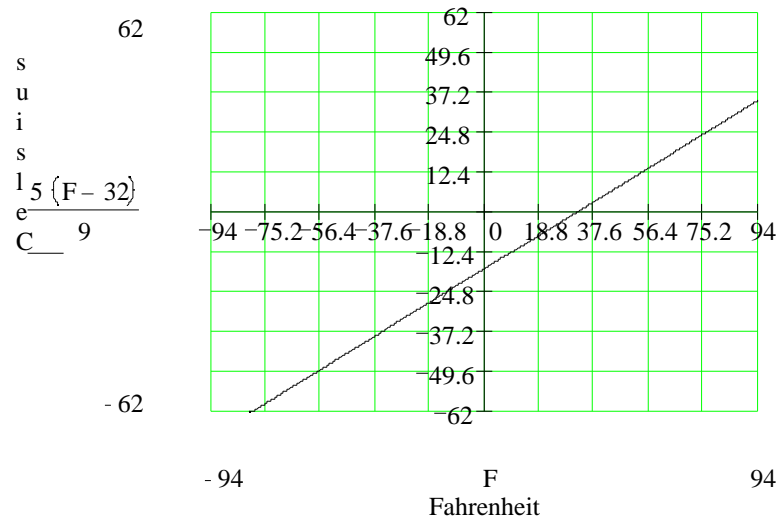
- a) $\text{PIXELWIDTH} = \frac{X_{\text{max}} - X_{\text{min}}}{158}$
- b) $\text{PIXELHEIGHT} = \frac{Y_{\text{max}} - Y_{\text{min}}}{98}$
- c) $X_{\text{min}} = 0$
 $X_{\text{max}} = 474$
 $\text{PIXELWIDTH} = \frac{474 - 0}{158} = \frac{474}{158} = 3$

11)

a)

°Fahrenheit	°Celsius
10	-12.2
30	-1.1
50	10
70	21.1
90	32.2

c)



13) Let G be the number of gallons of paint required to paint the wall [dependent variable]. Let A be the area of the wall (in ft^2) [independent variable].

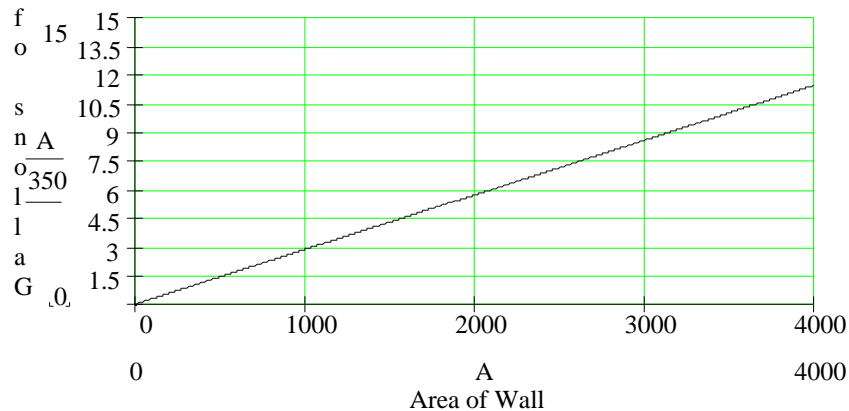
1. Formula

$$G = \frac{A}{350} = \frac{1}{350} A$$

2. Table of Values

Area of Wall (ft^2)	Gallons of Paint Needed
1000	2.86
2000	5.71
3000	8.57
4000	11.43

3. Graph



15)

1. Formula

Let P be the price of the painting [dependent variable].

Let t be the age of the painting (in years) [independent variable].

$$P = 30t + 300$$

2. Table of Values

Age of Painting (yrs)	Price of Painting (\$)
0	300
1	330
2	360
3	390
4	420
5	450

3. Graph

a

P

f

o

e

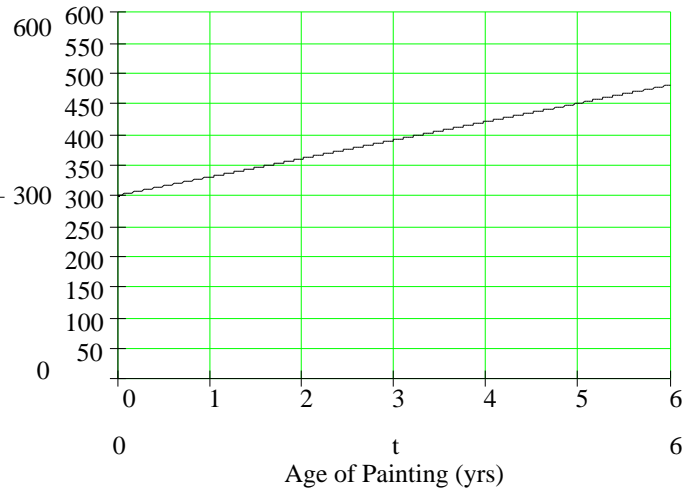
c

i

r

P

30t + 300

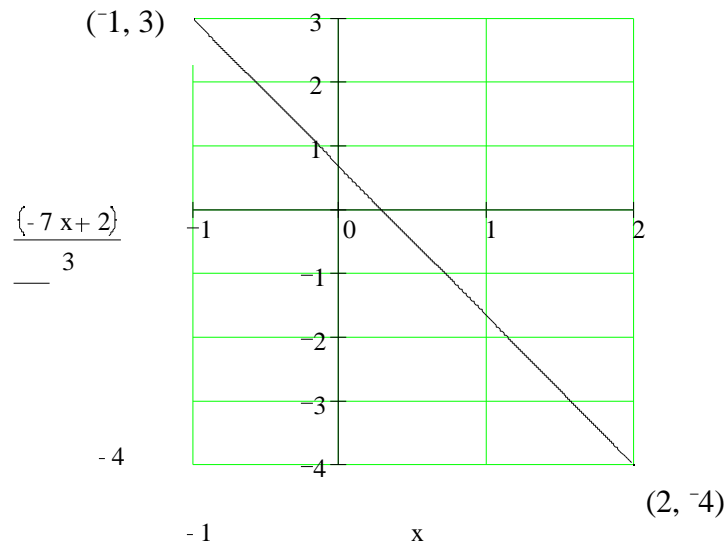


17)

a) $P = 18 \text{ in}$

b) $A = 19.76 \text{ in}^2$

19)



- a) Rise = -7
Run = 3
- b) $D = \sqrt{58} \approx 7.62$
- c) $D = \sqrt{\text{Run}^2 + \text{Rise}^2}$