

$$14) \frac{y - (-2)}{x - 2} = \frac{7}{-3}$$

$$= 7x - 14 = -3y - 6$$

$$3y = -7x + 8$$

$$y = \frac{-7}{3}x + \frac{8}{3}$$

15 Convert 26.2 miles to Km

$$1 \text{ mile} = 1.609$$

$$26.2 \text{ miles} = 26.2 \times 1.609$$

$$= 42.1558 \text{ km}$$

16 42 miles $\rightarrow$ 1 hour

$$100 \text{ km} = \frac{100}{1.609}$$

$$= 62.1504 \text{ miles}$$

$$\frac{62.1504}{42} \times 1 = 1.47977$$

$$1.47977 \times 60 = 88.7862 \text{ mins}$$

17 Convert pounds/Cubic Inch to Kg

$$1 \text{ kg/mL} = 36.127 \text{ pounds/Cubic Inch}$$

$$\frac{50}{36.127} = 1.384 \text{ kg/mL}$$

$$36.127$$

18) Amount Spent = X

$$\text{Tip} = 0.2X \quad \text{Tax} = 0.09X$$

$$\text{Total} = 0.29X$$

$$100 - X = 0.29X$$

$$100 = 1.29X$$

$$X = 77.519$$

$$19) \frac{115}{100} = 149.50$$

$$\frac{100}{100} = \frac{100}{115} \times 149.50 = 130$$

$$130$$

$$20) A = 30,000 \left(\frac{1 + 0.06}{12} \right)^{12}$$

$$= 31,850.3344$$

$$b) A = 30,000 \left(\frac{1 + 0.06}{12} \right)^{24} =$$

$$33,814.79$$

$$c) 60,000 = 30,000 (1.005)^x$$

$$(1.005)^x = 2$$

$$x \log 1.005 = \log 2$$

$$x = 138.97572 \text{ months}$$

$$21) y = 3^x$$

$$x \quad 1 \quad 2 \quad 3 \quad 4$$

$$y \quad 3 \quad 9 \quad 27 \quad 81$$

$$(1, 3) (2, 9) (3, 27) (4, 81)$$

$$14) \frac{y - (-2)}{x - 2} = \frac{7}{-3}$$

$$\begin{aligned} &= 7x - 14 = -3y - 6 \\ 3y &= -7x + 8 \\ y &= \frac{-7}{3}x + \frac{8}{3} \end{aligned}$$

15) Convert 26.2 miles to Km

$$1 \text{ mile} = 1.609$$

$$\begin{aligned} 26.2 \text{ miles} &= 26.2 \times 1.609 \\ &= 42.1558 \text{ Km} \end{aligned}$$

16) 42 miles $\rightarrow$ 1 hour

$$100 \text{ km} = \frac{100}{1.609}$$

$$= 62.1504 \text{ miles}$$

$$\frac{62.1504}{42} \times 1 = 1.47977$$

$$1.47977 \times 60 = 88.7862 \text{ mins}$$

17) Convert pounds/Cubic Inch to Kg

$$1 \text{ kg/mL} = 36.127 \text{ pounds/Cubic Inch}$$

$$\frac{50}{36.127} = 1.384 \text{ kg/mL}$$

18) Amount Spent = X

$$\text{Tip} = 0.2X \quad \text{Tax} = 0.09X$$

$$\text{Total} = 0.29X$$

$$100 - X = 0.29X$$

$$100 = 1.29X$$

$$X = 77.519$$

$$19) \frac{115}{100} = 149.50$$

$$\frac{100}{100} = \frac{100}{115} \times 149.50 = 130$$

$$\begin{aligned} 20) A &= 30,000 \left(\frac{1 + 0.06}{12} \right)^{12} \\ &= 31,850.3344 \end{aligned}$$

$$\begin{aligned} b) A &= 30,000 \left(\frac{1 + 0.06}{12} \right)^{24} = \\ &33,814.79 \end{aligned}$$

$$\begin{aligned} c) 60,000 &= 30,000 (1.005)^x \\ (1.005)^x &= 2 \\ x \log 1.005 &= \log 2 \end{aligned}$$

$$x = 138.97572 \text{ months}$$

$$21) y = 3^x$$

x	1	2	3	4
y	3	9	27	81

$$(1, 3) (2, 9) (3, 27) (4, 81)$$

22 6 inches / Year

1 mile / hour = 555633 inch / Year

$$6 = \frac{6}{555633600} = 1.08101 \times 10^{-9}$$

23 1 m / Sec = 2.237 miles / hour

$$3.00 \times 10^8 \text{ m/s} = 3.00 \times 10^8 \times 2.237$$

$$= 6.711 \times 10^8$$

24 $3\frac{1}{2} = \frac{7}{2}$

$$1\frac{7}{8} = \frac{15}{8}$$

$$\frac{7}{2} \times 2 = 7$$

$$\frac{15}{8} \times 2 = \frac{15}{4}$$

$$7 + \frac{15}{4} = 10.75 = 10\frac{3}{4}$$

25 $3\frac{1}{2} = \frac{7}{2}$

$$1\frac{7}{8} = \frac{15}{8}$$

$$\text{Area} = \frac{7 \times 15}{2 \times 8}$$

$$\text{Area} = 5.375$$