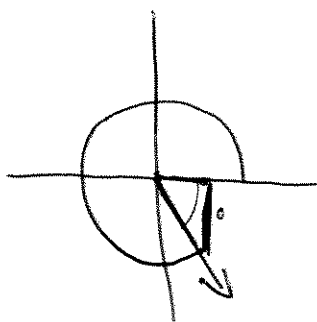


Assignment #5 I 34, 36, 37 II 25-28, 30

34.



$$\frac{5(180)}{3}$$

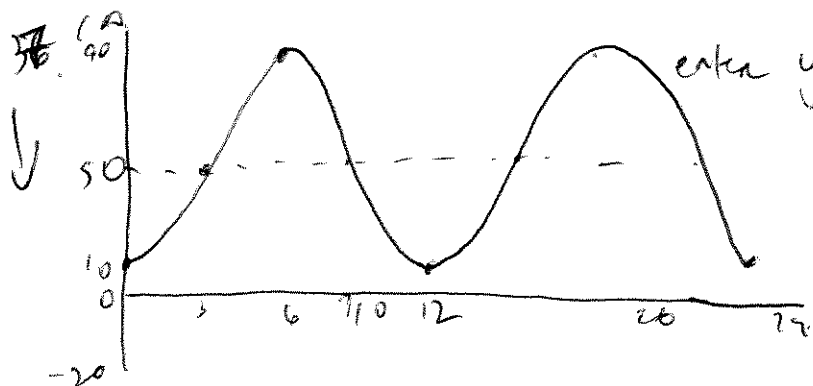
$$\frac{5\pi}{3} \text{ radians} = 300^\circ$$

Ref. $\angle = 60^\circ$

coordinates = $(\cos \theta, \sin \theta)$

$$= \left(\frac{1}{2}, -\frac{\sqrt{3}}{2}\right)$$

$-\frac{\pi}{3}$ passes through, or $\frac{5\pi}{3} + 2\pi = \frac{11\pi}{3}$



enter $y = -40 \cos 30x + 50$ degree mode

$a = +40$ $b = \frac{\pi}{6}$ $d = 50$

min = $50 - 40$ max = $50 + 40$

period = $\frac{2\pi}{\frac{\pi}{6}} = 12$

period = The cycle for a year
amplitude = how high above and below the middle temperature it will go.

16.

$$x^2 + 5x + 4 = \frac{5}{x+2}$$

$$x+2 \overline{) x^3 + 7x^2 + 14x + 3}$$

$$\underline{-x^3 + 2x^2}$$

$$5x^2 + 14x$$

$$\underline{-5x^2 + 10x}$$

$$4x + 3$$

$$\underline{-4x + 8}$$

$$-5$$

No, $x+2$ is not a factor because there is a remainder.

28 $(-3+8i)(-5-2i)$

$$15 - 40i + 6i - 16(-1)$$

$$\quad \quad \quad +16$$

37 $-34i + 31$

$(31 - 34i)$

distributive property

associative property addition

commutative property

$$26. \quad y = 12e^{2x}$$

$$\frac{x}{12} = \frac{12e^{2y}}{12}$$

$$\frac{x}{12} = e^{2y}$$

$$\frac{\ln\left(\frac{x}{12}\right)}{2} = \frac{2y}{2}$$

$$\frac{\ln\left(\frac{x}{12}\right)}{2} = y = h^{-1}(x)$$

$$\text{if } h(x) = 10, y = 10$$

Then $x = 10$ is the inverse

so

$$\frac{\ln\left(\frac{10}{12}\right)}{2}$$

27. enter data

$$y = 5000(.8)^x$$

or

$$y = a(b)^x$$

$$a = \text{initial} = 5000$$

$$b = \text{multiplier} = \frac{4000}{5000} = .8$$

$$28. \quad 2^{\frac{3}{4}} \sqrt{2^3}$$

Ignore. Bad Q.

$$30. \quad \frac{x+2}{x^2+2x-3} = f(x)$$

$$y\text{-int} = \text{set } x = 0$$

$$y = \frac{0+2}{0^2+2(0)-3} = \left(-\frac{2}{3} = y\text{-int}\right)$$

$$x^2+2x-3 \neq 0$$

$$(x+3)(x-1) = 0$$

$$x = -3 \quad x = 1$$

vertical asymptote at

$$x\text{-int} = \text{set } y = 0$$

$$\frac{0}{x} = \frac{x+2}{x^2+2x-3} \quad \left(\frac{x+2=0}{x=-2}\right) = x\text{-int}$$