

$$a) \quad \frac{V}{2} = 2(ab + bc + ca), \text{ for } a.$$

$$\frac{1}{2}V = ab + bc + ca \quad \Rightarrow \quad \frac{1}{2}V - bc = ab + ca$$
$$\frac{1}{2}V - bc = a(b+c)$$

$$\Rightarrow \quad a = \frac{\frac{1}{2}V - bc}{b+c}$$

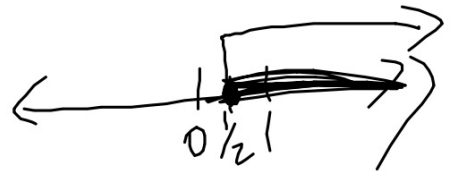
$$98) A = P + xrf \\ = P($$

$$27) 2x - 1 \geq 0$$

$$\frac{2x}{2} \geq \frac{1}{2} \Rightarrow x \geq \frac{1}{2}$$

Graphically

Interval:
 $[\frac{1}{2}, \infty)$



$$34) f(x) = 2x + 1$$

$$y = 2x + 1$$

$$x = \frac{y-1}{2}$$

$$\frac{x-1}{2} = \frac{2x}{2}$$

$$y = \frac{x-1}{2}$$

$$90) \log_3 x^2 = 2 \log_3 4 - 4 \log_3 5$$

$$= \log_3 4^2 - \log_3 5^4$$

$$= \log_3 \left(\frac{4^2}{5^4} \right)$$

$$\sqrt{x^2} = \sqrt{\frac{4^2}{5^4}} \Rightarrow x = \pm \frac{4}{25}$$

$$59) \sin 2x = -\frac{\sqrt{3}}{2}$$
$$\cancel{2 \sin x \cos x} = -\frac{\sqrt{3}}{2}$$

$$\sin \theta = -\frac{\sqrt{3}}{2}$$
$$\frac{4\pi}{3}, \frac{5\pi}{3}$$

oo oo

$$2x = \frac{4\pi}{3} \text{ or}$$

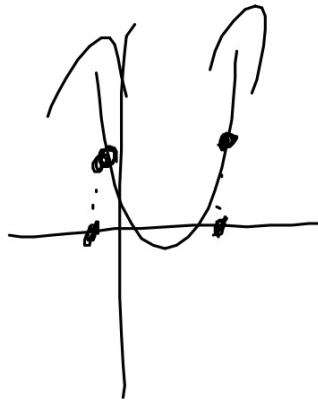
$$2x = \frac{5\pi}{3}$$

$$= \frac{4\pi}{6} = \boxed{\frac{2\pi}{3}}$$

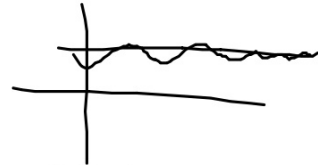
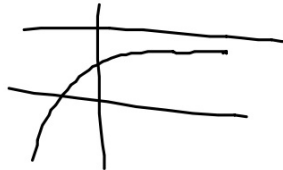
$$\boxed{\frac{5\pi}{6}}$$

$$\S) f(x) = \frac{x^2}{3} = \frac{1}{3}x^2 \quad \text{ONE}$$

one-to-one: For every output there is exactly one input.



HA "Ceiling"
"Floor"



74) $f(x) = \frac{x^2 + 2x + 1}{x^3 + x + 7}$

HA: $y=0$

$$\frac{10004x + 104268961}{x^2}$$

$$\frac{x^3 - 1}{x^2 + 7}$$

DNE

