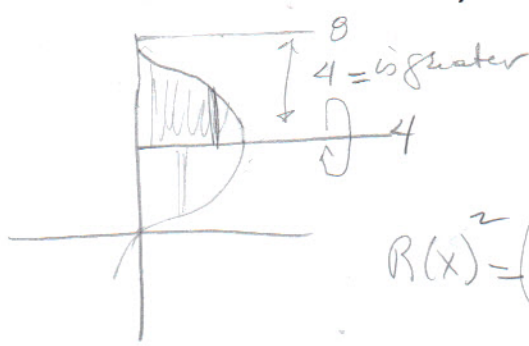
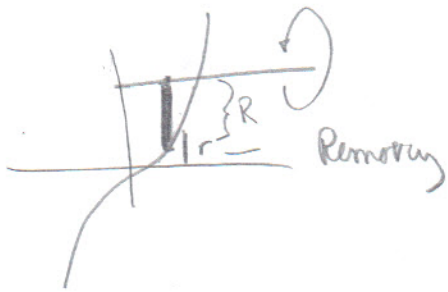


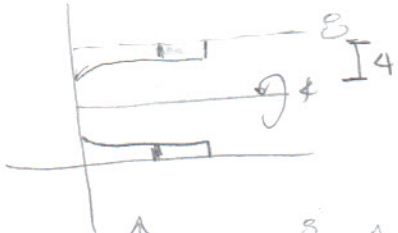
16



Finding the radius: 1.2

$$R(x) = \left(4 - \frac{1}{2}x^3\right)^2$$

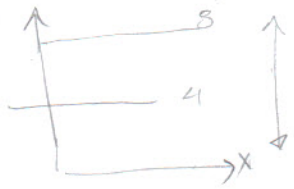
17



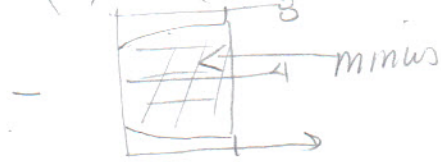
4 is greater thus

$$R(x)^2 - (r(x)^2)$$

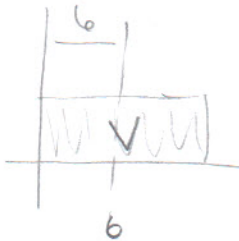
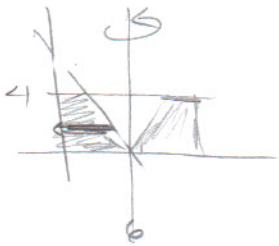
$$\left(4^2 - \left(4 - \frac{1}{x+1}\right)^2\right)$$



R=4  
Volume

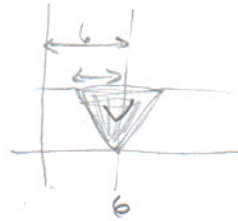


20



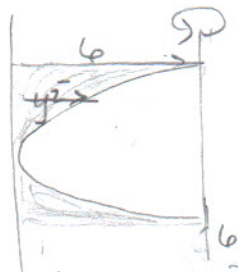
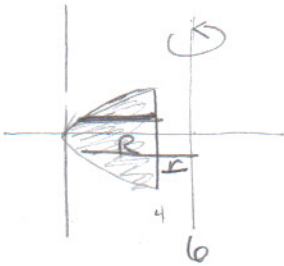
$$R^2 = 6^2$$

minus



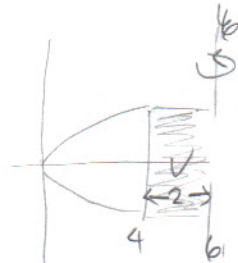
$$r^2 = (6 - (6 - y))^2$$

21

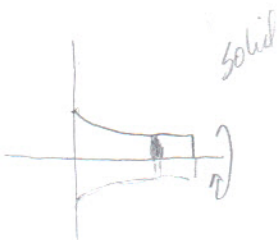


$$(6 - y^2)^2 - (6 - 4)^2$$

minus

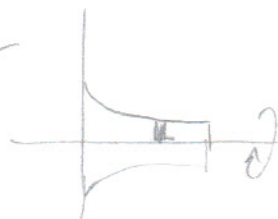


23



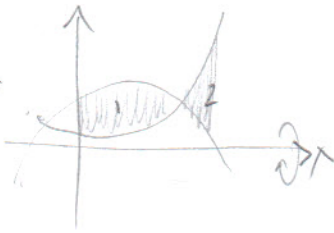
$$R = \frac{1}{\sqrt{x+1}}$$

26



$$R = \frac{3}{x+1}$$

29



①



Plus

②



$$y = x^2 + 1 \quad \text{---} \quad y = x^2 + 2x + 5$$

greater lesser

$$(-x^2 + 2x + 5)^2 - (x^2 + 1)^2$$

greater lesser

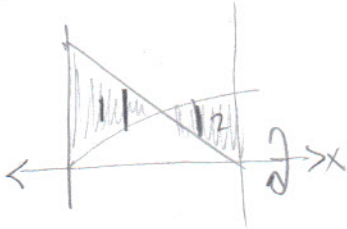
$$(x^2 + 1)^2 - (-x^2 + 2x + 5)^2$$

30

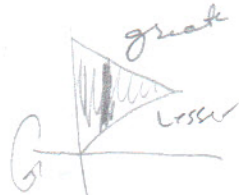
$$y = \sqrt{x}$$

$$y = -\frac{1}{2}x + 4$$

greater - lesser



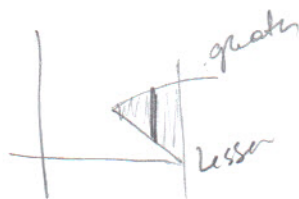
①



$$\left(-\frac{1}{2}x + 4\right)^2 - (\sqrt{x})^2 = R(x)$$

Plus

2



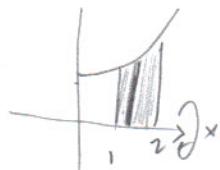
$$(\sqrt{x})^2 - \left(-\frac{1}{2}x + 4\right)^2 = R(x)$$

33



$$\left(-\frac{1}{3}y + 2\right)^2 = R(y)$$

35



$$R(x) = (e^{x-1})^2 = e^{2x-2}$$