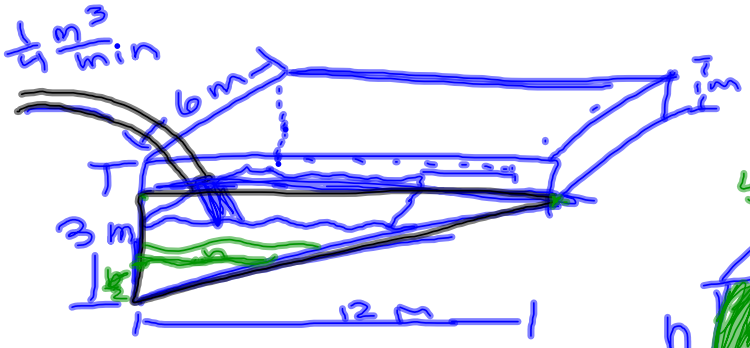
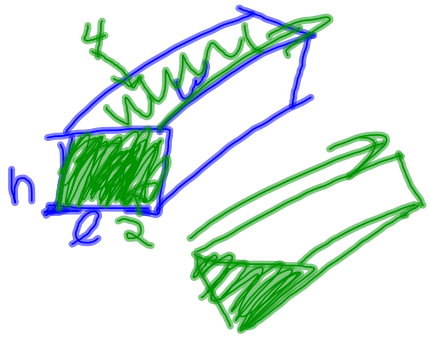




$$V = \frac{1}{2} b \cdot h \cdot \omega$$

$h : b = 2 : 12$

$\frac{h}{b} = \frac{2}{12}$ $\frac{h}{b} = \frac{1}{6}$

$6h = b$

$\frac{dh}{dt}$ $\frac{dV}{dt} = \frac{1}{4}\frac{m^3}{min}$

$V = \frac{1}{2}(6h)h \cdot 6m$

$V = 18h^2$

$\frac{dV}{dt} = 36h\frac{dh}{dt}$

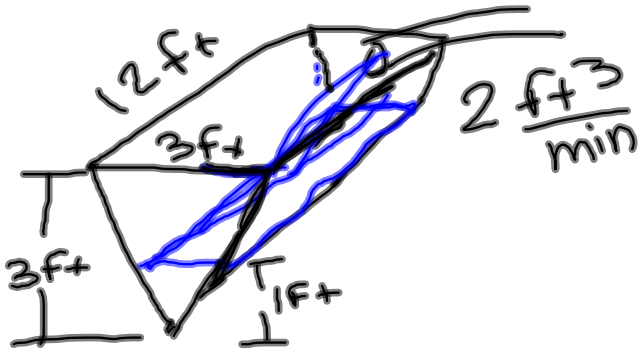
$\frac{1}{4} = 36h\frac{dh}{dt}$

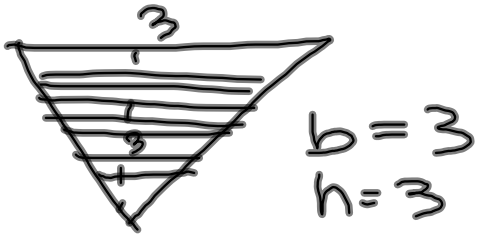
What is the change in height when $h = 1.4$ m

$\frac{1}{4} = 36 \cdot 1.4 \frac{dh}{dt}$

$\frac{1}{4} = 50.4 \frac{dh}{dt}$

$\frac{dh}{dt} = 0.0050$ m/min





$$V = \frac{1}{2} b \cdot h \cdot w$$

$$V = \frac{1}{2} h \cdot h \cdot 12$$

$$V = 6h^2$$

$$\frac{dV}{dt} = 12h\frac{dh}{dt}$$

$$2 = 12 \cdot 1 \frac{dh}{dt}$$

$$\frac{2 = 12\frac{dh}{dt}}{12}$$

$$\frac{dh}{dt} = \frac{1}{6} \frac{ft}{min}$$

$$\frac{b}{h} = \frac{3}{3}$$

$$b = h$$

$$\left(n^{\frac{3}{4}} + n^{\frac{1}{2}}\right)\left(n^{-\frac{3}{4}} + n^{-\frac{1}{2}}\right)$$

$$n^0 + n^{\frac{1}{4}} + n^{-\frac{1}{4}} + n^0$$

$$2 + n^{\frac{1}{4}} + n^{-\frac{1}{4}}$$

$$2 + \sqrt[4]{n} + \frac{1}{\sqrt[4]{n}} \cdot \frac{\sqrt[4]{n}}{\sqrt[4]{n}}$$

$$2 + \sqrt[4]{n} + \frac{\sqrt[4]{n}}{\sqrt{n}} \qquad \sqrt{n} \cdot \sqrt{n} = n$$