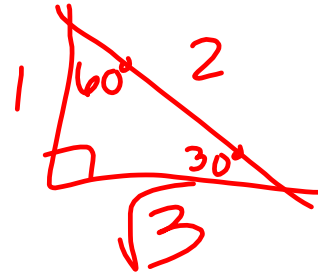
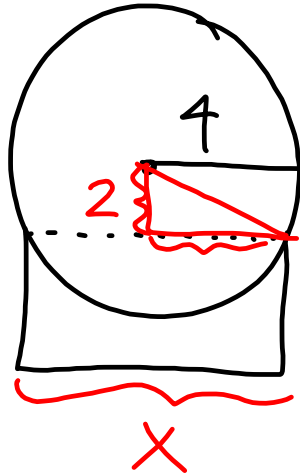
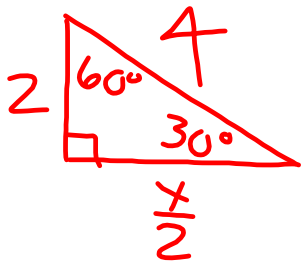


# Test 3

41.



$$\sqrt{16 - 4} = \sqrt{12} = 2\sqrt{3}$$

$(x-7)$  is a factor of  $2x^2 - 11x + k$

$$(x-7)(2x-b)$$

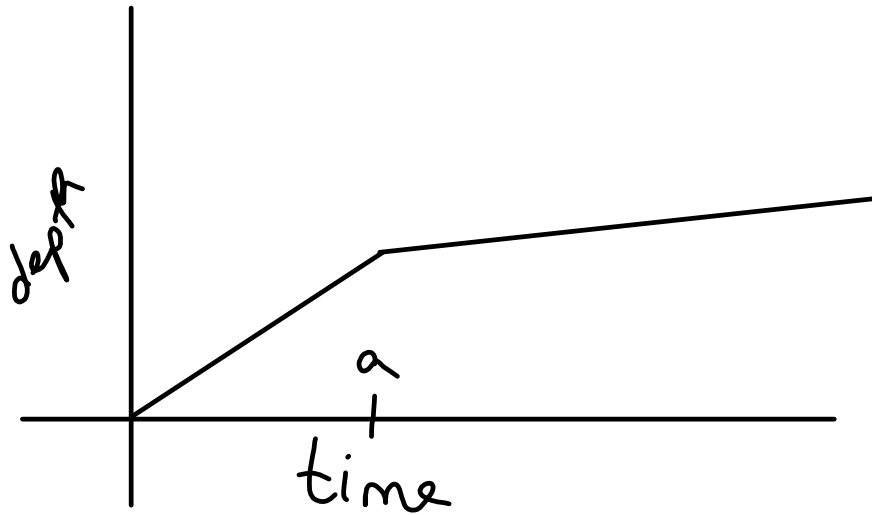
$$2x^2 - bx - 14x + 7b$$

$$2x^2 - (-3)x - 14x + 7(-3)$$

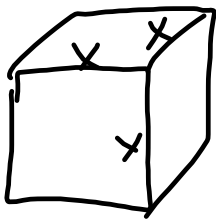
$$+ 3x - 14x$$

$$- 11x$$

$-21$

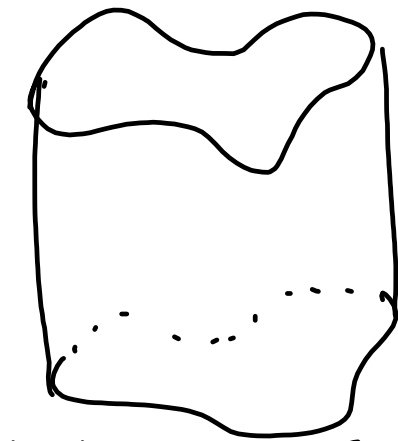


$$\text{flow} = \frac{\text{depth}}{\text{time}}$$



$$\begin{aligned} V_s &= x \cdot x \cdot x \\ &= x^3 \end{aligned}$$

$$V_2 = (2x)^3 = 8x^3$$



$$V = \text{area of base} \times \text{height}$$

$$\frac{.75(.8(\cancel{90}))}{\cancel{90}} = 60\%$$

$$3. \quad (-2x^5y^2)^4 = (-2)^4 x^{20} y^8$$

$$x^a x^b = x^{a+b}$$

$$(x^a)^b = x^{ab}$$

$$= 16x^{20}y^8$$

$$39. \quad r = 4 \text{ ft}$$

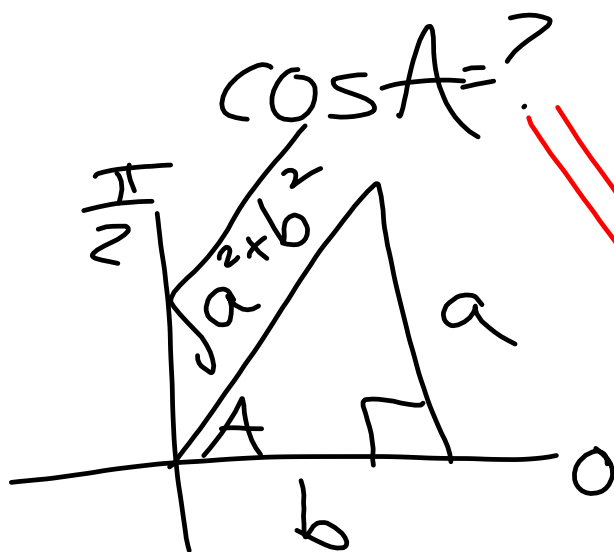
$$\text{length} = 25 \text{ ft}$$

$$\pi r^2 h = 3.14 \cdot 16 \cdot 25$$

$$\approx 1300$$

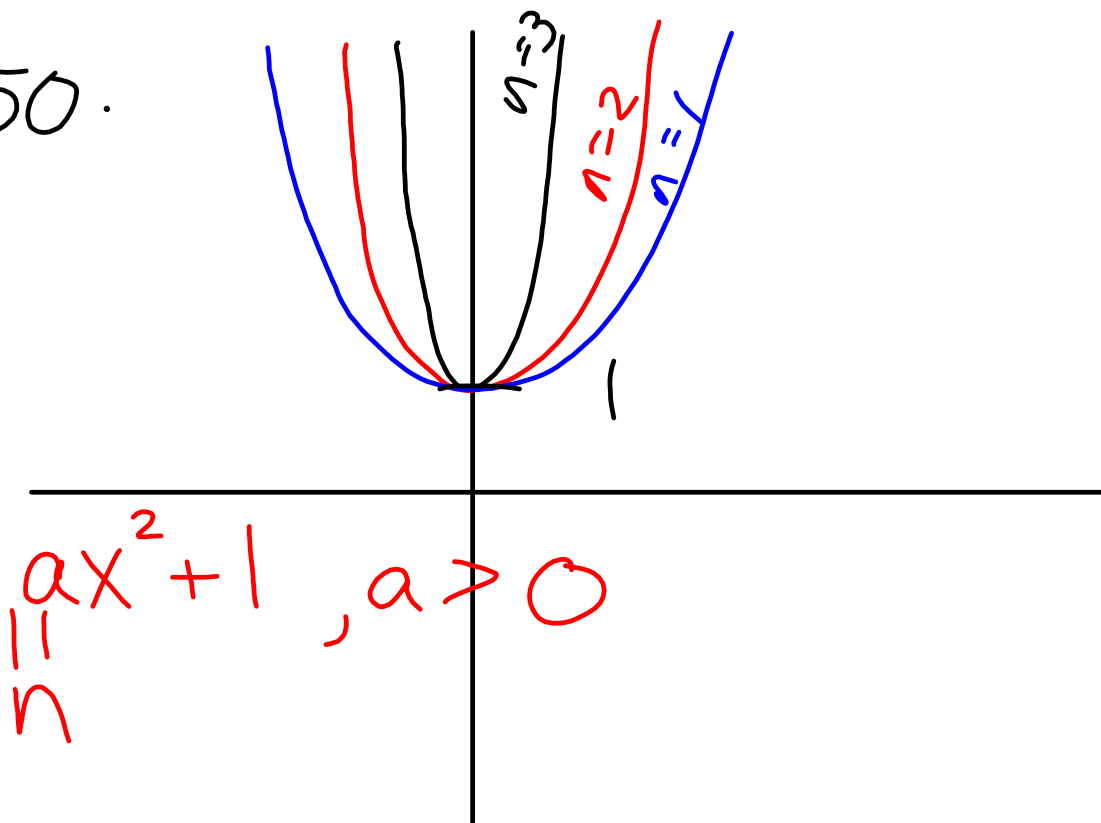
$$49. \quad \tan A = \frac{a}{b}, \quad a, b > 0,$$

$$0 < A < \frac{\pi}{2}$$

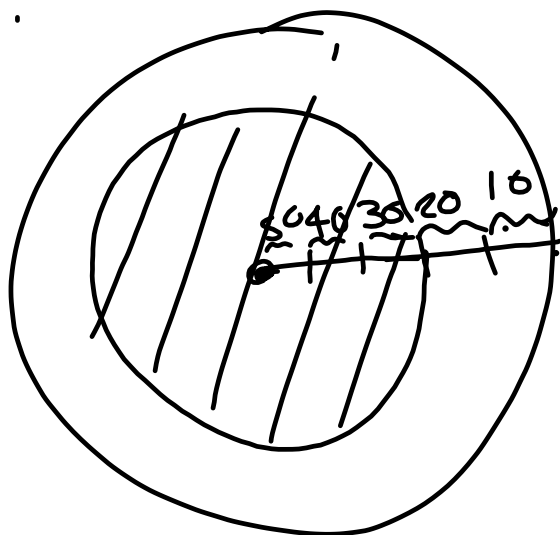


$$\frac{b}{\sqrt{a^2 + b^2}}$$

50.



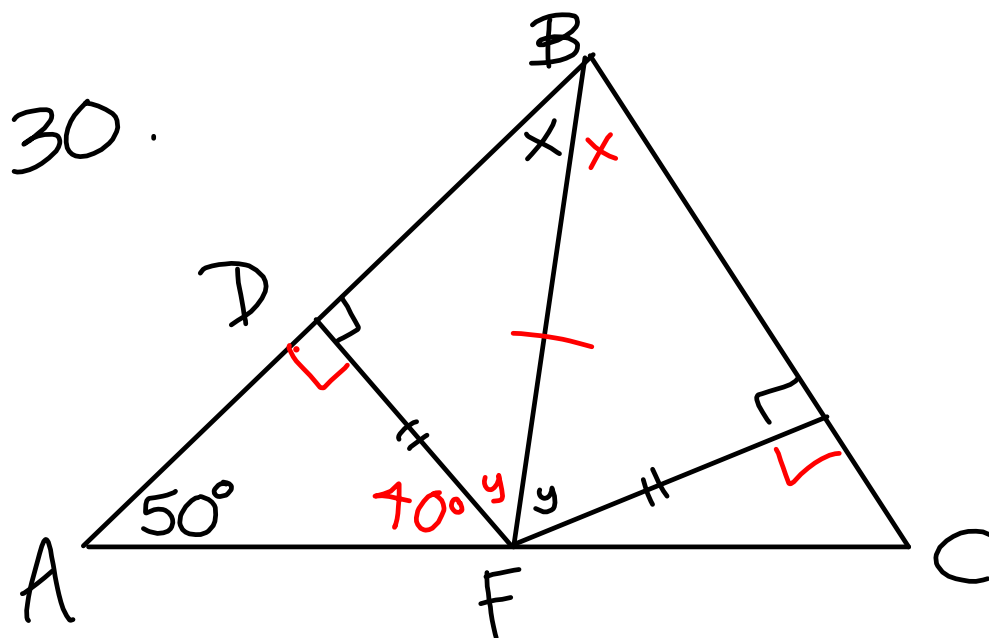
51.



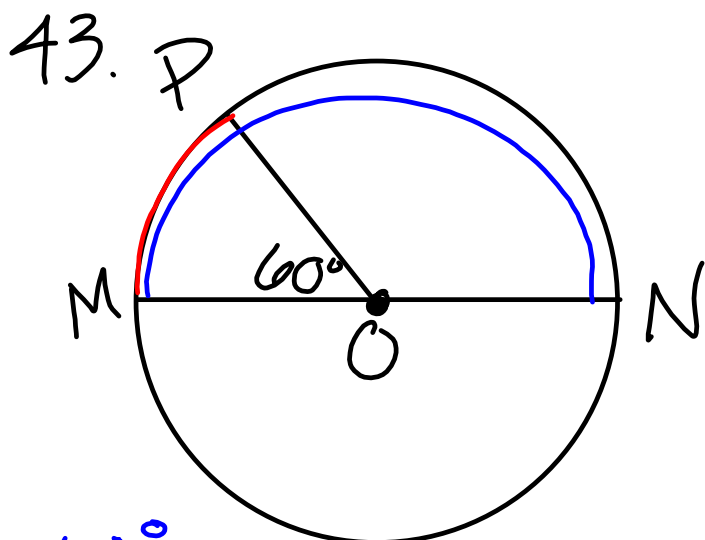
$$\frac{\text{win area}}{\text{total area}} = \frac{\pi \cdot 6^2}{\pi \cdot 10^2} = \frac{36}{100} = 36\%$$

53.

period =  
smallest interval  
over which function  
repeats exactly



$$x + y = 90^\circ$$



$$\frac{60^\circ}{180^\circ} = \frac{1}{3} = 33\frac{1}{3}\%$$

52.

$$a:b = 3:4$$

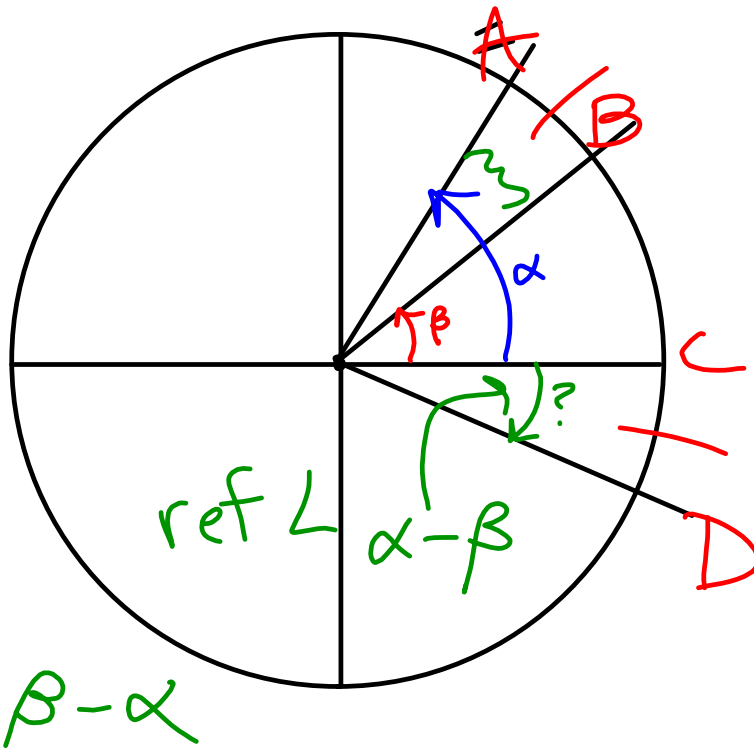
$$c:b = 1:2$$

$$a:c = ?$$

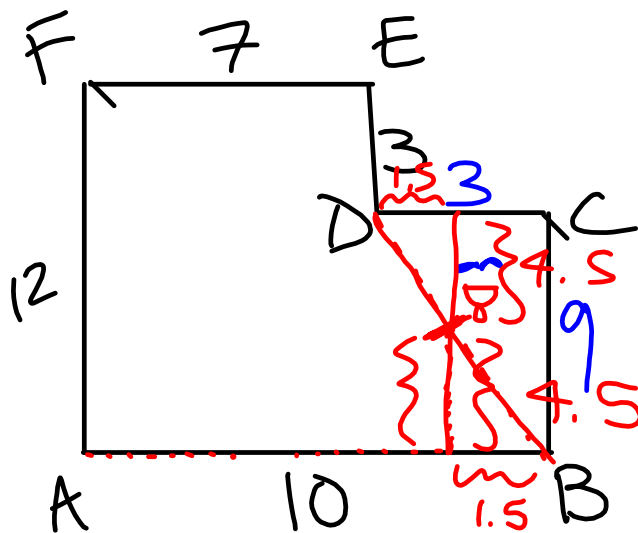
$$\begin{aligned} \frac{c}{a} &= \frac{a}{b} \cdot \frac{b}{c} \\ &= \frac{3}{4} \cdot \frac{2}{1} = \boxed{\frac{3}{2}} \end{aligned}$$

$$\begin{aligned} \frac{a}{b} &= \frac{3}{4} \\ \frac{c}{b} &= \frac{1}{2} \\ \frac{c}{a} &= \frac{c/b}{a/b} = \frac{1/2}{3/4} = \frac{1}{2} \cdot \frac{4}{3} = \frac{4}{2 \cdot 3} = \frac{2}{3} \end{aligned}$$

58.



Test 1 #35



10 - 1.5 blocks east  
 4.5 blocks north