

84.) Day 2  
290 # 39, 41, 71-77, 83, 87, 91, 103, 107

39) a.  $45^\circ + 360 = 405^\circ$   
 $45^\circ - 360 = -315^\circ$   
b.  $-36^\circ + 360 = 324^\circ$   
 $-36 - 360 = -396^\circ$

87)  $s = r\theta$   
 $s = 15(\pi) = 15\pi \text{ in}$   
 $\approx 47.12 \text{ in}$

41) a.  $240^\circ + 360 = 600^\circ$   
 $240 - 360 = -120^\circ$   
b.  $-180 + 360 = 180^\circ$   
 $-180 - 360 = -540^\circ$

91)  $A = \frac{1}{2}r^2\theta$   
 $= \frac{1}{2}(4)^2 \frac{\pi}{3}$   
 $= \frac{8\pi}{3} \text{ in}^2$   
 $\approx 8.378 \text{ in}^2$

70) a.  $54^\circ 45' = 54.75^\circ$   
b.  $-128^\circ 30' = -128.5^\circ$

73) a.  $85^\circ 18' 30'' = 85.3083^\circ$   
b.  $330^\circ 25'' = 330.00694^\circ$

75) a.  $240.6^\circ = 240^\circ 36'$   
b.  $-145.8^\circ = -145^\circ 48'$

77) a.  $2.5^\circ = 2^\circ 30'$   
b.  $-3.58^\circ = -3^\circ 34' 48''$

83)  $s = r\theta$   
 $6 = 27\theta$   
 $\theta = \frac{6}{27} = \frac{2}{9} \text{ radians}$

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$$D = 7\frac{1}{4}''$$

$$1 \text{ rev} = 2\pi$$

$$5200 \text{ rev} = 5200(2\pi) = 10400\pi = \theta$$

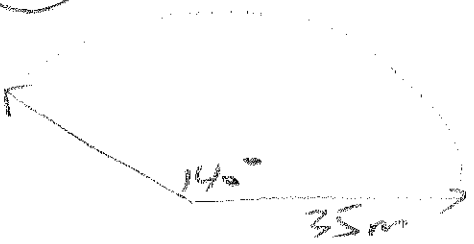
$$a) \omega = \frac{\theta}{t} = \frac{10400\pi}{1} \approx 32,672.564 \text{ radians/min}$$

$$b) v = \frac{s}{t} = \frac{r\theta}{t} = \frac{29(10400\pi)}{1} = 37700\pi \approx 118,438 \frac{\text{in}}{\text{min}}$$

$$\div 12 = \frac{37700\pi}{12} = \frac{9425\pi}{3}$$

$$\approx 9869.84 \frac{\text{in}}{\text{min}}$$

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$$A = \frac{1}{2}r^2\theta$$

$$= \frac{1}{2}(35)^2 \frac{7\pi}{9}$$

$$= \frac{8575\pi}{18} \approx 1496.62 \text{ m}^2$$

$$\frac{140\pi}{180} = \frac{7\pi}{9}$$

$$\frac{7\pi}{180} = \frac{\theta}{c}$$

$$180 \frac{\pi}{180} = \frac{7\pi}{9}$$