

Warm Up: Pre - Calc

1/15

Convert to radians.

1) 120  $\frac{2\pi}{3}$   $\circ \checkmark \frac{2}{3} \pi$

2) 530  $\frac{53}{18} \pi$

3) -190  $-\frac{19}{18} \pi$

Convert to degrees.

1)  $\pi/6$   $30^\circ$

2)  $9/16 \pi$   $101.25$

3)  $-3/10 \pi$   $-54$

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Solutions to P.W.: pg. 189 #10 - 14

10. Quadrant IV

11. a.  $250^\circ$ b.  $70^\circ$ 

12. a. 38.56 in.

b. 20.83 mm

13.  $65.48^\circ$ 

14. Neil correctly recognizes that the two angles are coterminal but does not realize that the two angles subtend different arcs. The  $195^\circ$  angle subtends an arc that is greater than half the circle, but the  $-165^\circ$  angle subtends an arc that is less than half the circle.

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## Solutions to P.W.: pg. 191 #4 - 6

4. Convert each degree measure to radians. Give exact answers.

a.  $45^\circ$

$$\frac{\pi}{4}$$

b.  $-210^\circ$

$$\frac{-7\pi}{6}$$

c.  $15^\circ$

$$\frac{\pi}{12}$$

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## Solutions to P.W.: pg. 191 #4 - 6

5. Convert each radian measure to the nearest degree.

a.  $\frac{\pi}{2}$

$$90^\circ$$

b.  $\frac{2\pi}{3}$

$$120^\circ$$

c. 4

$$229^\circ$$

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## Solutions to P.W.: pg. 191 #4 - 6

6. Name the quadrant or axis where the terminal side of each angle lies.

a.  $\frac{\pi}{5}$

I

b.  $-\frac{4\pi}{7}$

III

c.  $\frac{3\pi}{2}$

negative y-axis

d.  $\frac{11\pi}{8}$

III

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## In Class Work:

A fly lands on the end of minute hand of the Great Clock of Wesminster (Big Ben) at 11:20. The minute hand of the clock is 14 ft. long.

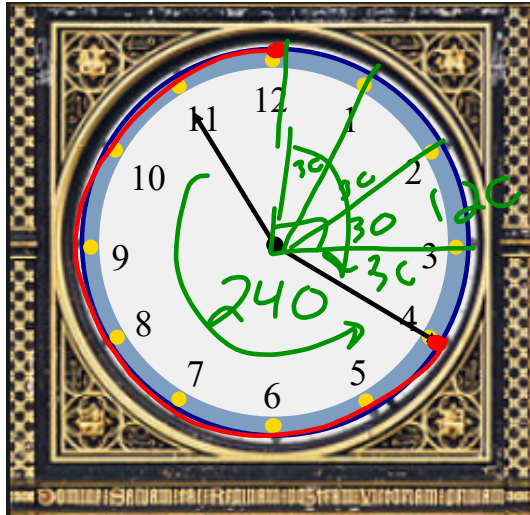
What is the total distance the fly travels while sleeping for 40mins? 760mins?

At 720 mins later what is the total displacement?



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Solutions to I.C.W:



$$C = 28\pi$$

$$\frac{40}{60}$$

$$\frac{240}{360}$$

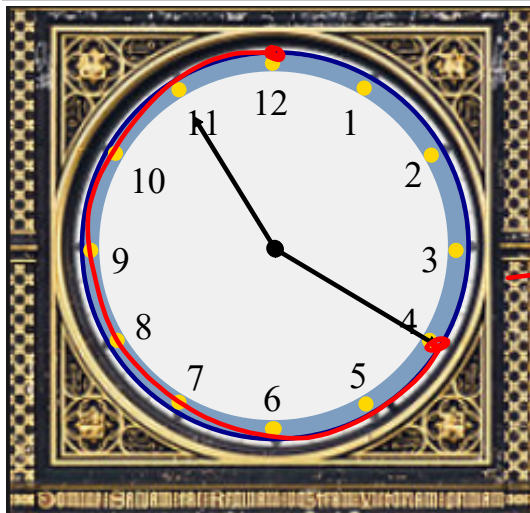
$$\frac{2}{3} \cdot 28\pi$$

$$56\pi$$

$$\frac{56\pi}{3}$$

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Solutions to I.C.W:



$$40$$

$$\frac{760}{60} = 12.\overline{66}$$

$$12 \text{ hrs } 40 \text{ min}$$

$$\frac{56\pi}{3}$$

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Today's Activities:

- Work with radian / degrees

P.W. for tonight:

- A night off from math work. Don't get used to it.

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