

What month is your birthday ?

What are the first 2 digits of your address ?

What are the last 2 digits of your zip code ?

What are the last 2 digits of your social security number ?

[IF YOU DO NOT HAVE A SOCIAL SECURITY NUMBER,
USE YOUR STUDENT ID NUMBER]TO RECEIVE FULL CREDIT, YOU MUST SHOW NEATLY HOW YOU ARRIVED AT YOUR ANSWERS

An airplane propeller rotates 850 times per minute. Find the number of degrees that a point on the edge of the propeller will rotate in 11 seconds.

SCORE: ___ / 3 POINTS

850 ROTATIONS PER MINUTE

$$= \frac{850}{60} \text{ ROTATIONS PER SECOND}$$

$$= \frac{850}{60} \times 360 \text{ DEGREES PER SECOND}$$

$$= \left[\frac{850}{60} \right] \times \left[360 \right] \times \left[11 \right] \text{ DEGREES IN } 11 \text{ SECONDS} = \left[56,100 \right] \text{ IN } 11 \text{ SECONDS}$$

OR $\frac{11 \text{ SECONDS}}{60 \text{ SECONDS}} \times \frac{850 \text{ ROTATIONS}}{1 \text{ MINUTE}} \times \frac{360^\circ}{1 \text{ ROTATION}}$

Find the angle of least positive measure coterminal with -5280° .

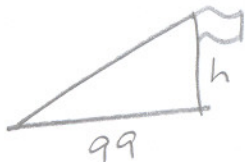
SCORE: ___ / 2 POINTS

$$-5280^\circ + 360^\circ \times 15$$

$$= 120^\circ$$

Firefighters at the Morganza Fire Station need to measure the height of the station flagpole. They find that at the instant when the shadow of the station is 18m long, the shadow of the flagpole is 99m long. The station is 10m high. Find the height of the flagpole.

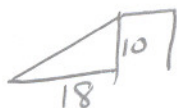
SCORE: ___ / 3 POINTS



$$\frac{h}{10} = \frac{99}{18} \quad 2 \text{ POINTS}$$

$$18h = 990$$

$$h = 55\text{m} \quad 1 \text{ POINT}$$

The measures of two angles of a triangle are $17^\circ 41' 13''$ and $96^\circ 12' 10''$. Find the measure of the third angle. Your answer should be in degrees/minutes/seconds format, NOT decimal degrees.

SCORE: ___ / 2 POINTS

$$180^\circ - (17^\circ 41' 13'' + 96^\circ 12' 10'')$$

$$= 180^\circ - 113^\circ 53' 23''$$

$$= 179^\circ 59' 60'' - 113^\circ 53' 23''$$

$$= 66^\circ 6' 37''$$

 $\frac{1}{2}$ POINT EACH