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Period: $\qquad$
Aim: Law of Sines (day 2)

Do Now: Fire towers $A$ and $B$ are located 10 miles apart. Rangers at fire tower $A$ spots a fire at $42^{\circ}$, and rangers at fire tower $B$ spot the same fire at $64^{\circ}$. How far from tower $A$ is the fire to the nearest tenth of a mile?


Tower A
Tower B

1. Find the height of the tree below to the nearest foot.

2. From points $A$ and $B, 10 \mathrm{~m}$ apart, the angles of elevation of the top of a tower are $40^{\circ}$ and $54^{\circ}$, as shown. Find the tower's height (to the nearest meter).

3. For the figure below find $\mathrm{m} \angle E D G$ to the nearest whole degree.


Now you try!
4. $\triangle \mathrm{DEA} \sim \triangle \mathrm{CBA}$, Find DE to the nearest whole number

5. For the figure below find BC to the nearest whole number. $\mathrm{CD}=15$.

6. Find the height of the building in the figure below to the nearest foot.

7. Suppose that you are the pilot of a commercial airliner. You find it necessary to detour around a group of thundershowers (see figure). You turn at an angle of $21^{\circ}$ to your original path, fly for a while, turn, and intercept your original flight path at an angle of $35^{\circ}, 70$ kilometers from where you left it. How much further did you have to go because of the detour?


