

**8R** Trig / Circles Review Activity

# Trigonometry Pile Up!

**How long is this side?**  $11.9 \text{ cm}$

$\sin 71^\circ = \frac{AZ}{12.6}$   
 $AZ = 12.6 \cdot \sin 71^\circ$   
 $AZ = 11.9$

$\cos 21^\circ = \frac{10.2}{XV}$   
 $XV = \frac{10.2}{\cos 21^\circ}$   
 $XV = 10.9$

$\sin 53^\circ = \frac{RQ}{15.4}$   
 $15.4 \cdot \sin 53^\circ = RQ$

$\sin 37^\circ = \frac{6.7}{OM}$   
 $OM = \frac{6.7}{\sin 37^\circ}$   
 $OM = 11.1$

$\tan 42^\circ = \frac{LK}{7.4}$   $LK = 6.7$   
 $7.4 + \tan 42^\circ = LK$

$\cos 11^\circ = \frac{EF}{10.7}$   
 $10.7 \cdot \cos 11^\circ = EF$   
 $10.5 = EF$   
 $DF = 9.6 - 2.5 + 3.6 = 10.7$

$\sin 34^\circ = \frac{8}{AC}$   
 $AC = \frac{8}{\cos 34^\circ} = 9.6$

$IH^2 = 11.3^2 - 3.8^2$   
 $IH = 10.6$

$IG = 10.5 - 2.1 + 2.9 = 11.3$

$WV^2 = 1.7^2 + 10.1^2$   
 $WV = 10.2$

$\tan 42^\circ = \frac{LK}{7.4}$   $LK = 6.7$   
 $7.4 + \tan 42^\circ = LK$

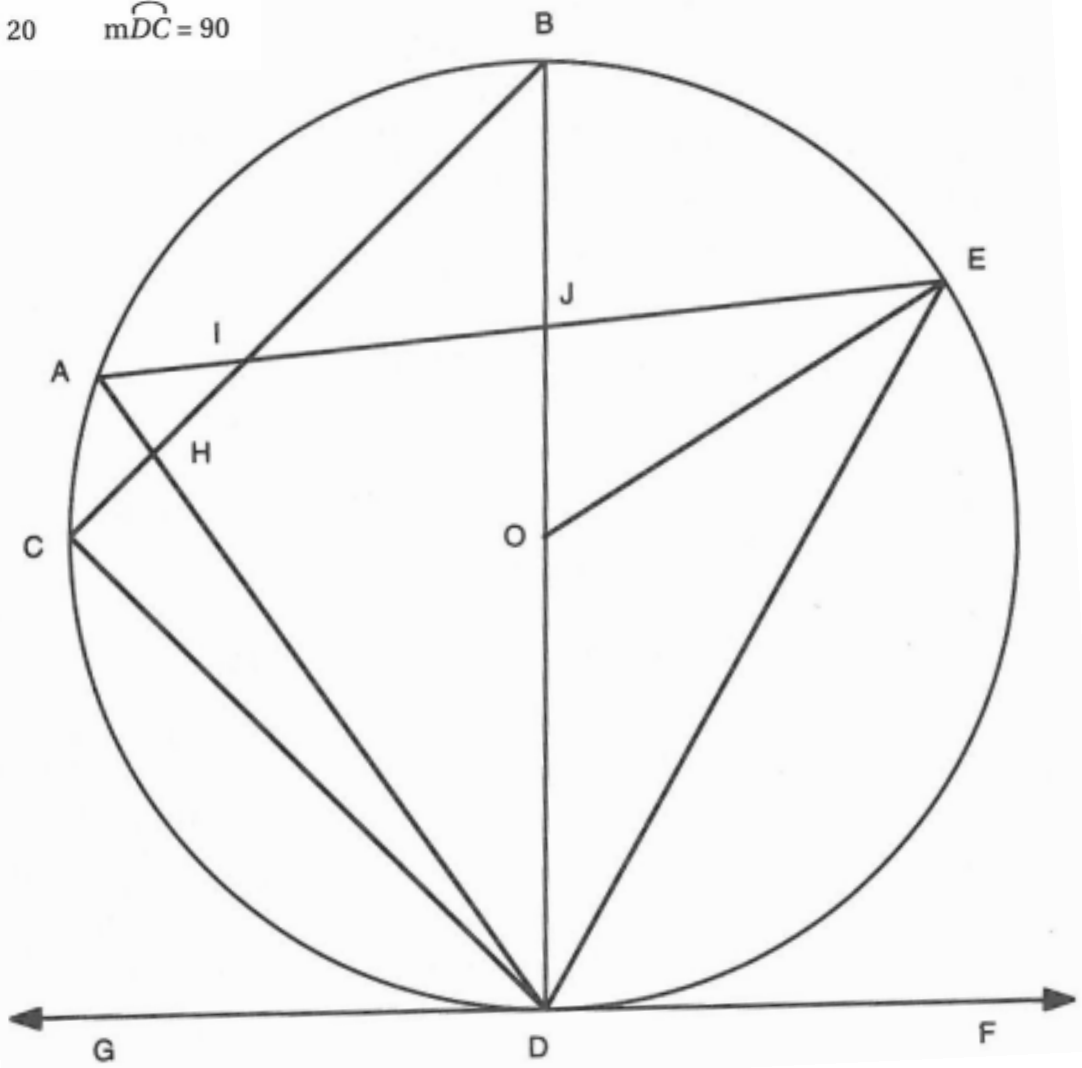
$\cos 11^\circ = \frac{EF}{10.7}$   
 $10.7 \cdot \cos 11^\circ = EF$   
 $10.5 = EF$   
 $DF = 9.6 - 2.5 + 3.6 = 10.7$

$\sin 34^\circ = \frac{8}{AC}$   
 $AC = \frac{8}{\cos 34^\circ} = 9.6$

© 2012 [www.greatmathsteachingideas.com](http://www.greatmathsteachingideas.com)

$\overleftrightarrow{GF}$  is tangent to Circle O at D.

$m\widehat{DE} = 122$      $m\widehat{AC} = 20$      $m\widehat{DC} = 90$



- |                                  |                                 |                                 |
|----------------------------------|---------------------------------|---------------------------------|
| 1. $m\angle EDF =$ <u>61°</u>    | 2. $m\angle DOE =$ <u>122°</u>  | 3. $m\angle OED =$ <u>29°</u>   |
| 4. $m\angle ODE =$ <u>29°</u>    | 5. $m\angle BDG =$ <u>90°</u>   | 6. $m\angle BCD =$ <u>90°</u>   |
| 7. $m\angle ADC =$ <u>10°</u>    | 8. $m\angle CDG =$ <u>45°</u>   | 9. $m\widehat{AB} =$ <u>70°</u> |
| 10. $m\widehat{BE} =$ <u>58°</u> | 11. $m\angle ADB =$ <u>35°</u>  | 12. $m\angle DAE =$ <u>61°</u>  |
| 13. $m\angle AED =$ <u>55°</u>   | 14. $m\angle BOE =$ <u>58°</u>  | 15. $m\angle BDF =$ <u>90°</u>  |
| 16. $m\angle CDB =$ <u>45°</u>   | 17. $m\angle AIB =$ <u>141°</u> | 18. $m\angle CHD =$ <u>80°</u>  |
| 19. $m\angle DHB =$ <u>100°</u>  | 20. $m\angle AIC =$ <u>39°</u>  | 21. $m\angle BIJ =$ <u>39°</u>  |
| 22. $m\angle AJB =$ <u>96°</u>   | 23. $m\angle EJD =$ <u>96°</u>  | 24. $m\angle AJD =$ <u>84°</u>  |
| 25. $m\angle JEO =$ <u>26°</u>   |                                 |                                 |