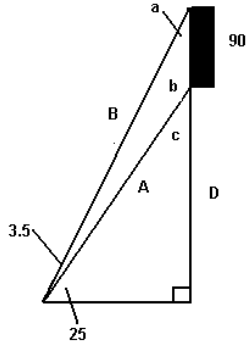


8. This problem deals with the Law of Sines. Start out by drawing a diagram.



We can figure out angle  $c$ . All the interior angles of a triangle add up to 180 degrees. Angle  $c = 180 - 90 - 25 = 65$ .

Then we can find angle  $b$ . A straight line is 180 degrees. Angle  $b = 180 - 65 = 115$ .

Then angle  $a$  will be  $180 - 3.5 - 115 = 61.5$ .

Using the Law of Sines we can find side  $A$ .

$$\frac{\sin 3.5}{90} = \frac{\sin 61.5}{A}$$

$$A \sin 3.5 = 90 \sin 61.5$$

$$A = \frac{90 \sin 61.5}{\sin 3.5} = 1295.6$$

Then we can find side  $D$  using the Sine

$$\sin 25 = \frac{D}{1295.6}$$

$$D = \sin 25(1295.6) = 547.5$$

If we round to the nearest whole number we get 548

Answer C