3.3 Solving Triangles

Monday, May 02, 2016
9:09 AM

**Ex 1** Solve the Triangle:

This means get every missing side and angle.

Pythagoras Theorem:

\[ 42^2 + 31^2 = DF^2 \]

\[ = 52.2 \text{m} \]

Solve this triangle:

1. \( \tan D = \frac{42}{31} \)
2. \( \tan^{-1} (43/31) = 54^\circ \)
3. \( 90 - 54^\circ = \angle F = 36^\circ \)
4. \( \tan 40^\circ = \frac{e}{12} \)
5. \( e = 10.1 \)
6. \( 12^2 + 10.1^2 = d^2 \)
7. \( d = 15.7 \)

Read the problem at the top of page 130.

\[ \tan 90^\circ = \frac{50}{1} \]
\[ 315.7 \text{m} \]

\[ \tan 70^\circ = \frac{50}{y} \]
\[ 407.2 \text{m} \]

Total distance: 722.9 m.

Your Turn pg 130.

Page 131:
1. a, c 2b, 3, 6-13
2. choose 4
\[ \tan 46 = \frac{100}{x} \quad \tan 22 = \frac{100}{y} \]

96.6m \quad 247.5 m

Bus travelled \quad 150.9 m