$\qquad$ Date: $\qquad$
Unit 7 Review Sheet
Things to recall/remember:

- Special Right Triangles

$$
\begin{array}{ll}
\circ & 30-60-90 \\
- & 45-45-90
\end{array}
$$

- Indirect Proofs
- Using Trigonometry to find side lengths
- Using Trigonometry to find angle measures (Inverse Trig Functions)
- SOH CAH TOA
- Angle of Elevation
- Angle of Depression

1. Find the missing side lengths in the following diagrams:
a.

b.

C.

d.

e.

f.

2. Given: $\overline{B C} \cong \overline{B D}$,
$\angle C \nRightarrow \angle D$

Prove: $\angle C B A \not \equiv \angle D B A$

3. Given: $\angle A D B \cong \angle C D B$, $\overline{A B} \not \equiv \overline{C B}$

Prove: $\overline{D B}$ does not bisect $\angle A B C$.

4. Find the missing side length to the nearest tenth:
a.

b.

C.

d.

5. Find the missing angle to the nearest whole degree:
a.

b.

C.

d.

6. A man flies a kite with a 100 foot string. The angle of elevation of the string is $52^{\circ}$. How high off the ground is the kite?
7. A person stands at the window of a building so that his eyes are 12.6 m above the level ground. An object is on the ground 58.5 m away from the building on a line directly beneath the person. Compute the angle of depression of the person's line of sight to the object on the ground.
8. A 14 foot ladder is used to scale a 13 foot wall. At what angle of elevation must the ladder be situated in order to reach the top of the wall?

