AChor/MFM2P **Name: _____**
Date: _____

Worksheet 3-6: Applications of Trigonometric Ratios

1. A ladder leans against a vertical wall and makes an angle of 65˚ with the ground. The foot of the ladder is 2 m from the base of the wall. What is the length of the ladder, to the nearest tenth of a metre?

2. From a point on the ground 30 m from the foot of the Peace Tower, the angle of elevation of the top of the tower is 72˚. Find the height of the tower, to the nearest metre.

3. The angle of depression of the top of the Skylon Tower in Niagara Falls to a point 50 m from the base of the tower is 78˚. Find the height of the tower, to the nearest metre.

4. The towrope pulling a parasailor is 90 m long. A crew member on the boat estimates that the angle between the towrope and the water is about 40˚. Find the height of the parasailor above the water, to the nearest 10 m.

5. A lighthouse sits at the top of a sheer cliff. The top of the lighthouse is 33 m above sea level. The angle of elevation from a small fishing boat at sea to the top of the lighthouse is 24˚. How far from the base of the cliff is the fishing boat, to the nearest metre?

6. The angle of depression from the top of the CN Tower in Toronto to a point 100 m from the base of the tower is 79.75˚. Find the height of the tower, to the nearest metre.

Answers: 1. 4.7 m**; 2.** 92 m**; 3.** 235 m**; 4.** 60 m**; 5.** 74 m**; 6.** 553 m