MCR3UI Unit 5 **Skill Reflection # 1** **PLEASE DO NOT WRITE ON THIS PAPER. RECORD ALL ANSWERS ON SCRAP PAPER.**

Part A: Multiple Choice. Record answers and all work on separate paper.

1. In triangle DEF, d = 8, e = 15, f = 17, F = 90 °. Determine sin D . Draw diagram on your answer paper.

   a. $\frac{8}{15}$ b. $\frac{15}{17}$ c. $\frac{8}{17}$ d. None of the above.

2. Marc is building a wheelchair ramp for the front door of his house. The ramp needs to have a vertical rise of 75 inches over a horizontal distance of 120 inches. At what angle of elevation should he build the ramp to the nearest degree? Show all work on your answer paper.

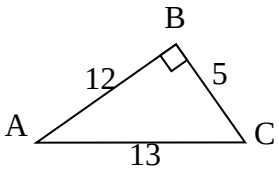
   a. 39 ° c. 51 °
   b. 58 ° d. 32 °

Part B: Short Answer. Answer all questions on your answer paper

3. Given ΔABC, state the 6 trig ratios for $\angle A$. Leave your answers in fraction form.

sin A = _____ cos A = _____ tan A = _____

csc A = _____ cot A = _____ sec A = _____



Part C: Full Solution: Draw a diagram and show your work on separate paper.

[6] 4. When Beth is sitting in her car in the parking lot at Waterloo-Oxford, the angle of elevation to the top of the cafeteria is 40°. Beth then drives ***further away*** and the angle of elevation to the top of the cafeteria is 25°. If the height of the cafeteria is 17.6 m and her eyes are 1.2m above the ground, determine how far Beth drove to the nearest tenth.