Mathematics I: Algebra/Geometry/Statistics
Assessing for Mathematics Success Training
Assessment Sample Items – Set 2

1. Given the center of a circle (2, –3) and a point on the circle (–1, –2), what is the length of the radius of the circle?
   a. 10
   b. 2
   c. 5.10
   d. 3.16

2. Find all points (4, *y*) that are 10 units from the point (–2, –1).
   a. (4, -11) and (4, 9)
   b. (4, -9) and (4, 7)
   c. (4, 8) and (4, -8)
   d. (4, 3) and (4, -3)

3. The coordinates of rectangle ABCD are A(0,2), B(4,8), C(7,6) and D(3,0). Which method would you use to show that the diagonals are equal in length?
   a. Find the midpoint of $\overline{AC}$ and $\overline{BD}$.
   b. Find the slope of $\overline{AC}$ and $\overline{BD}$.
   c. Find the distance from A to C and B to D.
   d. Find the distance from A to B and C to D.

4. Let A = (1, 5) and B = (3, -1). Point P(8, 4) is equidistant from A and B. Describe all such points.
   a. A line through P parallel to $\overline{AB}$.
   b. Any line parallel to $\overline{AB}$.
   c. A line through P that is the perpendicular bisector of $\overline{AB}$.
   d. Any line perpendicular to $\overline{AB}$.