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Name (print first and last) _____ Per _____ Date: 4/21 due 4/22

9.1 Locus: Fixed distance from a point

Geometry Regents 2013-2014 Ms. Lomac

SLO: I can sketch a diagram of the set of all points (locus) that are a fixed distance from a common point.

(1) Use the glossary links on Ms. Lomac's website to define (and illustrate) the following terms. If you do not have access to the website, use a geometry textbook (glossary and index) to define and illustrate them.

Locus

Fixed

Equidistant

(2) REALITY SKETCH: Locus -- Fixed distance from a point: A street performer is beatboxing on a corner downtown. Sketch a diagram that shows a bird's-eye-view (from above) of the performer and the people watching.

My Ideas

Class Ideas

(3) NOTES: The locus of points that are a fixed distance from a point . . .

Diagram



(a) High voltage electrical towers can be dangerous. A sign indicates that people should stay 20 feet away from the tower. Sketch the tower and the locus of points that are 20 feet from it.

(b) 104 In the diagram below, car A is parked 7 miles from car B. Sketch the points that are 4 miles from car A and sketch the points that are 4 miles from car B. Label with an X all points that satisfy both conditions.

Car A
•

Car B
•

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(c) 108 Towns A and B are 16 miles apart. How many points are 10 miles from town A and 12 miles from town B ?

- 1 1
- 2 2
- 3 3
- 4 0

(b) In the park, there is a water fountain that is 50 yards from a snow cone vendor. Katsyana wants to sell ice cream near the water fountain where a lot of people go, but far away from the snow cone vendor to reduce competition. She decides that 15 yards from the water fountain and 60 yards from the snow cone vendor would be ideal. Sketch a diagram and mark every point that will meet Katsyana's requirements with an X.

(e) Lincoln and Raekwon are swinging their keychains horizontally. Lincoln's keychain is 25cm long and Raekwon's keychain is 40cm long. Their hands are 70 cm apart. Sketch a diagram that shows the locus of points where their keys can be. Mark with an X any point that shows where the keys can run into each other, annoying Ms. Lomac.

(f) Summarize the process you used to create the diagrams for today's work and how you determined the location of points that satisfied the conditions of the problem.