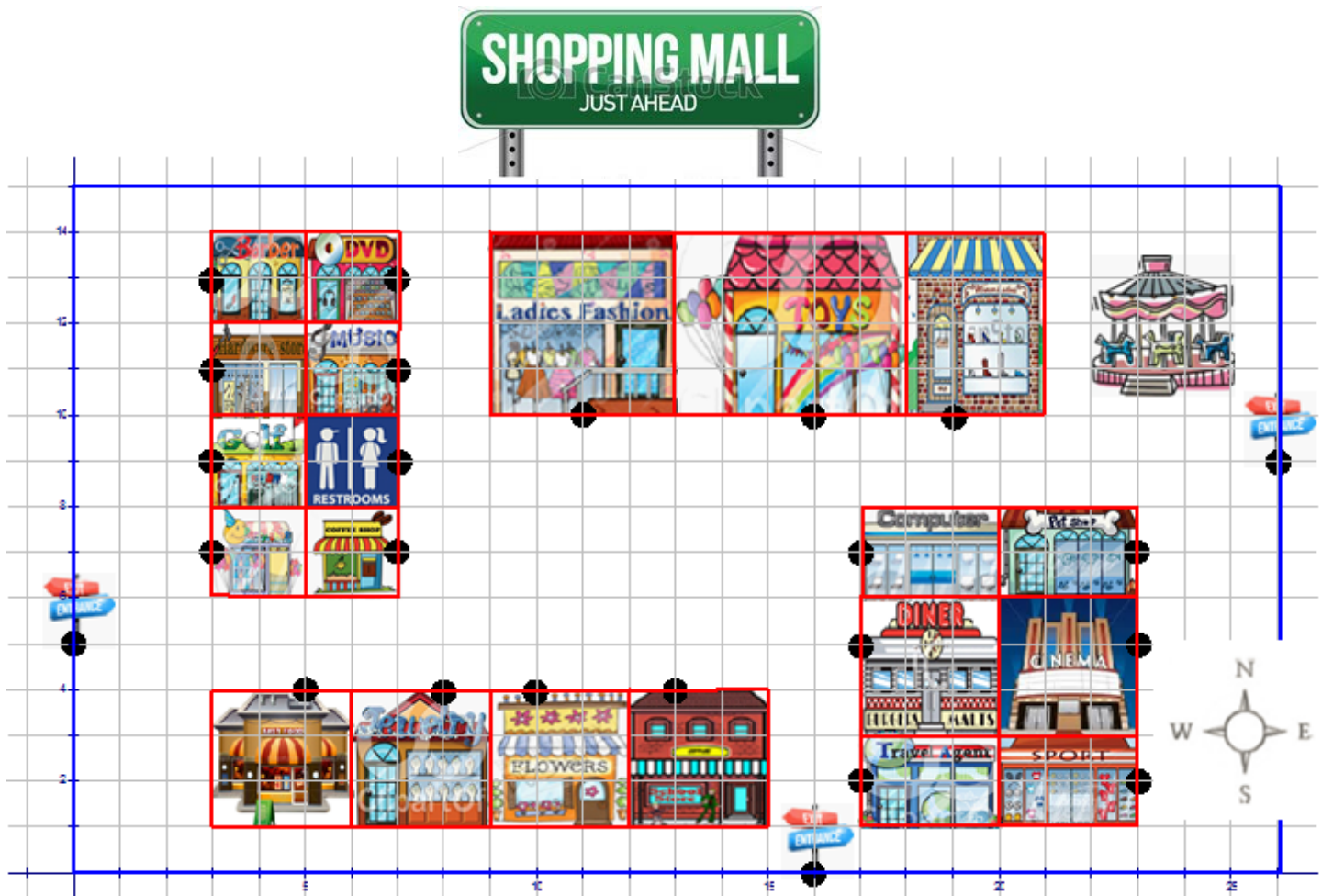


Trent and Jamie want to take a trip to the mall to buy a gift for a friend’s birthday. Jamie printed a layout of the mall to map out their route.

Use the map to answer the following questions. The black dots represent the doors to the mall or stores. You must use straight lines to answer the questions. Show all computations that lead up to your solutions.



Jamie wants to go to the toy store but wants to stop at a couple other stores as well. He gets to the mall early, before Trent. Jamie entered the mall at the East entrance to go to the Pet Shop. He looked around at the Pet Shop waiting for Trent to call so they could meet.

- Trent is at the West entrance and wants to meet Jamie at the midpoint of their two locations. Where would they meet? Use order pairs to represent their meeting location.
- After meeting, are they closer to the Toy store or Music store? Include mathematical computations to justify your answer.
- After meeting up, Jamie and Trent decide to get some food before shopping for the gift. What is the distance they will travel to get to the door of the closest food place?

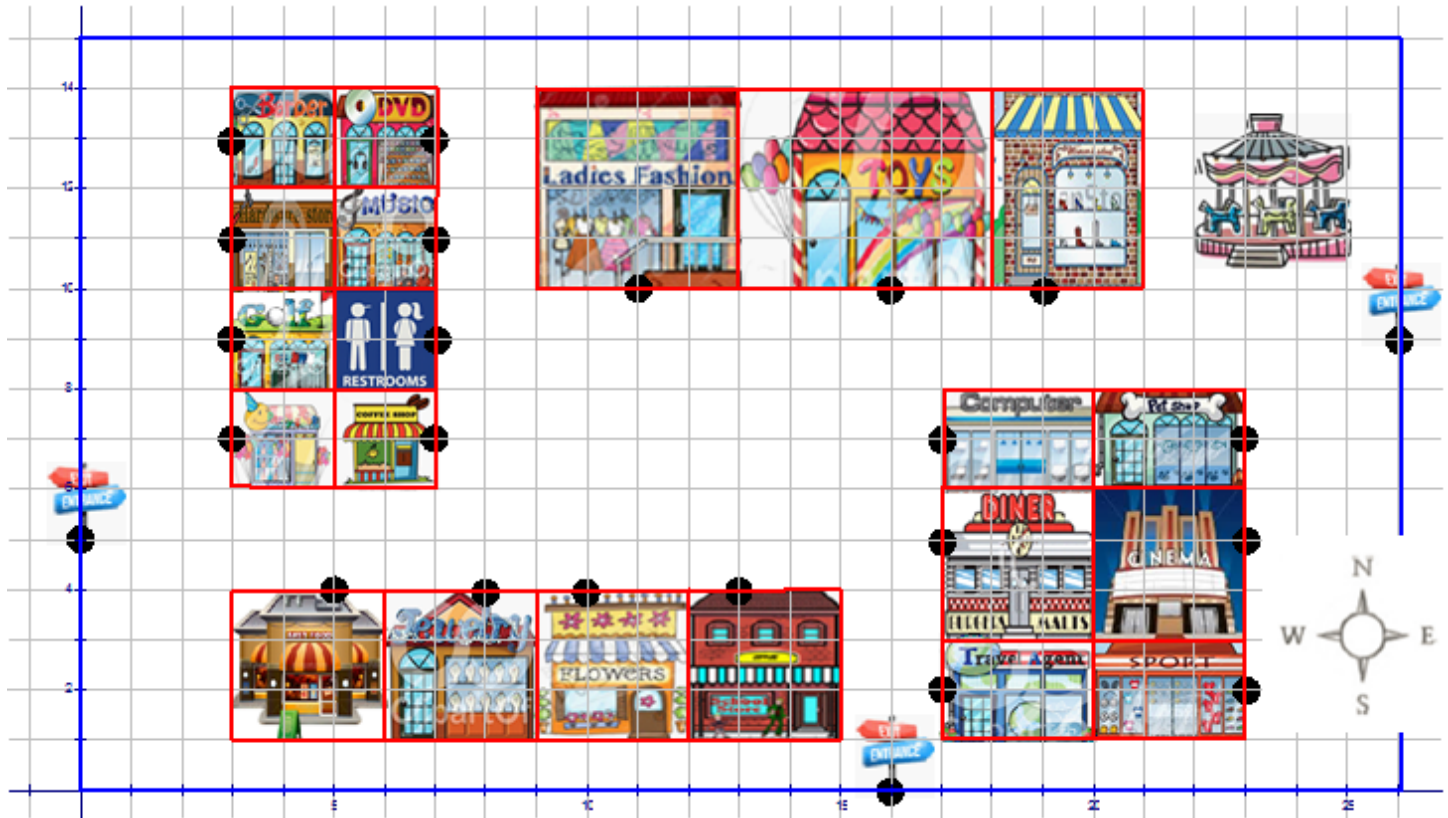
After they finished a snack they went to the Toy Store, bought a great gift for their friend, then left the mall.

- After leaving the Toy store, Trent went back to the original meeting place then to the entrance he came in. What was Trent’s total distance traveled from entrance to exit? (Do not include any walking time while in the stores.) Illustrate Trent’s route on the map provided.

Practice - Unit 1 (cont.)

Distance and Midpoint Assessment:

Use the mall layout to answer the following questions. Show all work and use appropriate formulas. The black dots represent doorways.



Select a store.

- A)** Calculate how far that store is from each entrance. Explain which entrance you would use to enter the mall and why.

You want to open a Nail Salon somewhere in the rectangular space of the mall that has vertices $(8, 5)$, $(8, 9)$, $(16, 9)$ and $(16, 5)$.

- B)** The doorway of your Nail Salon can be located by selecting two stores whose midpoint would fall inside the rectangular area. Show all work that leads to your answer.

Create a route:

- C)** The total distance traveled from an entrance, to three stores and to an exit while at the mall was between 20 and 65 units. Create a route using lines, which could include diagonal, vertical or horizontal lines. Remember you cannot cut through stores to get to another store. The total distance does not include shopping within the store. Your route should include:
- I. Which entrance you started at, the three stores you visited and the exit you left the mall
 - II. The calculated distance between each stop
 - III. The total distance traveled
- D)** Find the midpoint between each set of the stores that you visited.
- E)** Draw your route on the mall layout above. Mark each midpoint with an X.