

Building Bridges

Name: Answer Guide

Date: _____

Vocabulary

Compass - a tool used to show the current directions based on Earth's magnetic field

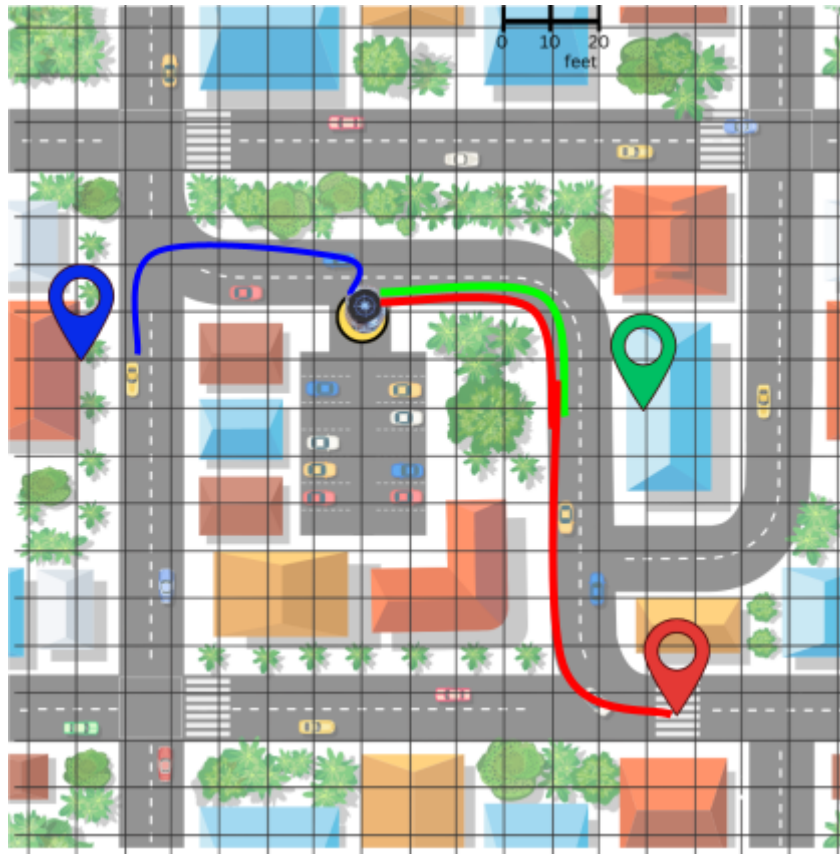
Scale - the distance on a map that represents the distance in real life

Distance - the total space between two points

Introduction

Navigating a Map

Ari is in the parking lot in the center of the map. Trace the roads that Ari should take to get to the green, red, and blue markers.



1 Use the scale to determine the distance to each location. (+-10 feet)

 80 feet

 70 feet

 140 feet

2 If North is at the top of this map, which direction is Ari moving to get to each marker?

 West

 East

 Southeast

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Activity

Bridge Building

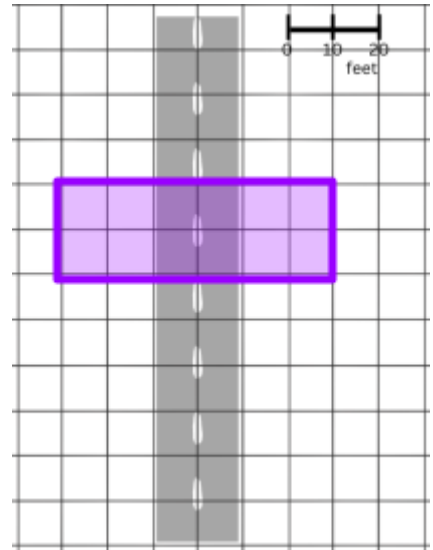
Ari is building bridges over the roads in their town so that animals can cross roads without getting hit. There are three places in town that need bridges built by Ari. Help measure and find the direction where the bridges should be built.

- 1 Bridge Project 1 - This bridge needs to be built 10 feet wide and must begin and end 20 feet from the side of the road.

- Draw the bridge on the map.

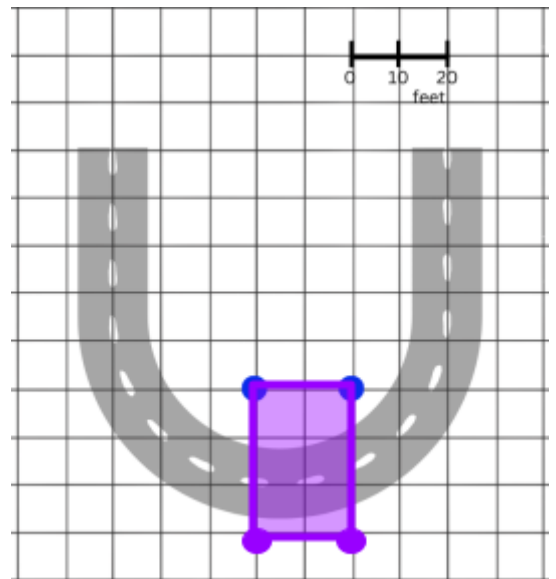
One example on map.

- If North is at the top of this map, which direction should the bridge be built? West ↔ East
- If a deer is crossing the bridge from the forest on the western side of the road, which direction is the deer crossing the bridge? East



- 2 Bridge Project 2 - This bridge has already been started. The blue points on the map indicate the base that has been started on one side of this bridge.

- The bridge is being built starting on the north side of the road and crossing to the south side of the road. It needs to be 30 feet long. Draw the two points on the south side of the road where the other end of the bridge will be built.
- If a moose crosses this bridge from the south and what direction are they moving? North



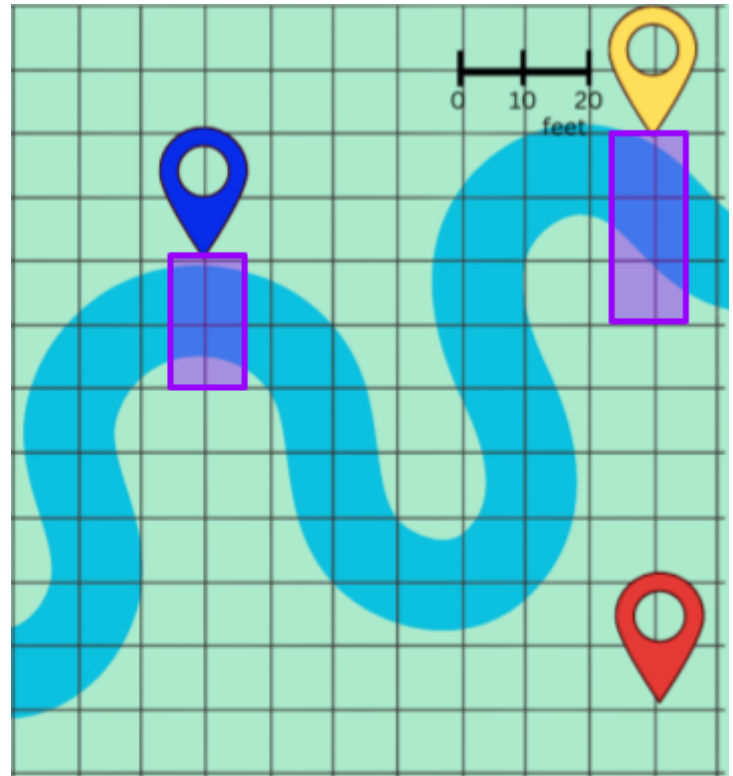
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3 Bridge Project 3 - This bridge is located in the wilderness and will be used to help the prairie dogs in the area travel safely around waterways. North is located at the top of this map.

- If a family of prairie dogs is traveling from the blue marker to the red marker, draw a bridge that will help them navigate the waterway.
- Which direction should they travel to cross the water? South
- Which direction will they move to avoid needing to cross more water? Continue South
- They leave the red marker and travel to the yellow marker. Draw a bridge they could use to get to the yellow marker.
- Which direction are they traveling now? North



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Exit Ticket

Since Ari cannot carry all of the building supplies, they hire a truck to pick up the supplies and deliver them to the first bridge site. Help Ari give directions to their delivery truck to get the wood and hardware needed for the bridge projects. Draw the path that the truck should take and write directions using Ari's compass and the map's scale.



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Step #	Distance (feet)	Direction
1	20	north
2	130	west
3 to tool shop	70	north
4	20	north
5	80	east
6 to woodshop	20	south
7	40	south
8	40	east
9 to bridge projects	80	north