

Ari's Afternoon Adventure

Name: _____

Date: _____

Vocabulary

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

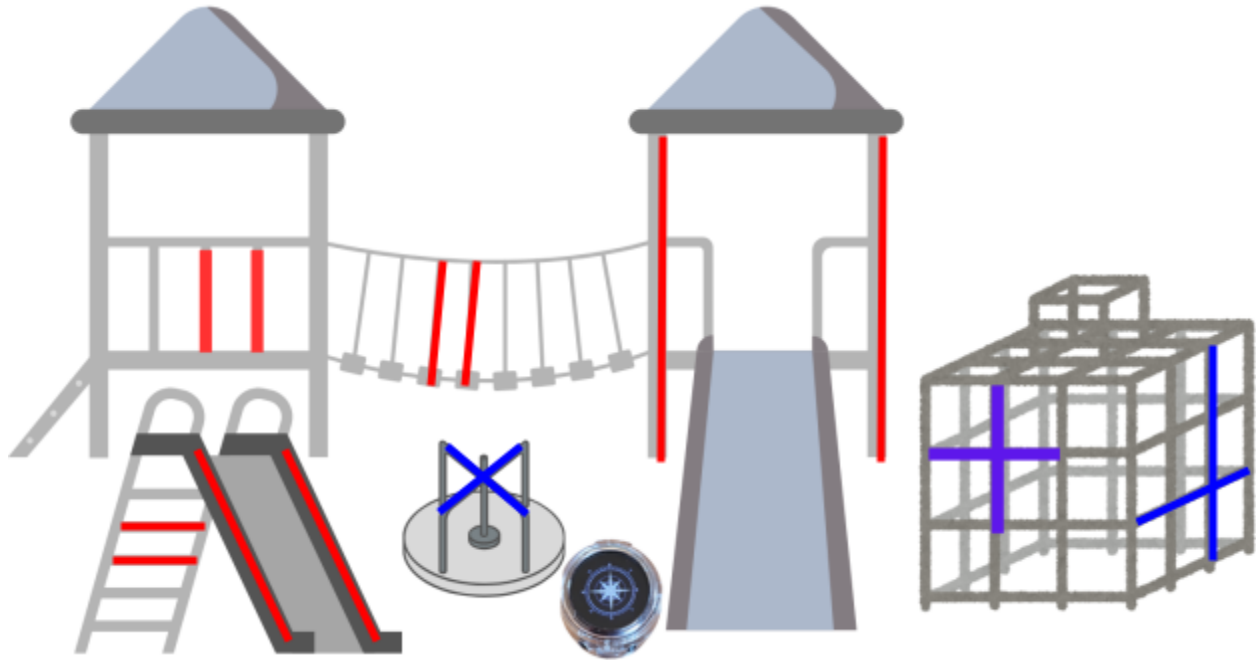
Perpendicular Lines - two lines that intersect at a right angle with one another

Parallel Lines - two lines that never intersect and remain the same distance apart

Introduction

Parallel and Perpendicular Lines

Ari's playground is full of fun obstacles for Ari to try. Let's find parallel and perpendicular lines within their playground.



1

Find three sets of parallel lines within Ari's playground and color them red.

Some examples labeled in red.

2

Find a set of perpendicular lines within Ari's playground and color them blue.

Some examples labeled in blue.

Activity 1

Ari's Afternoon Adventure

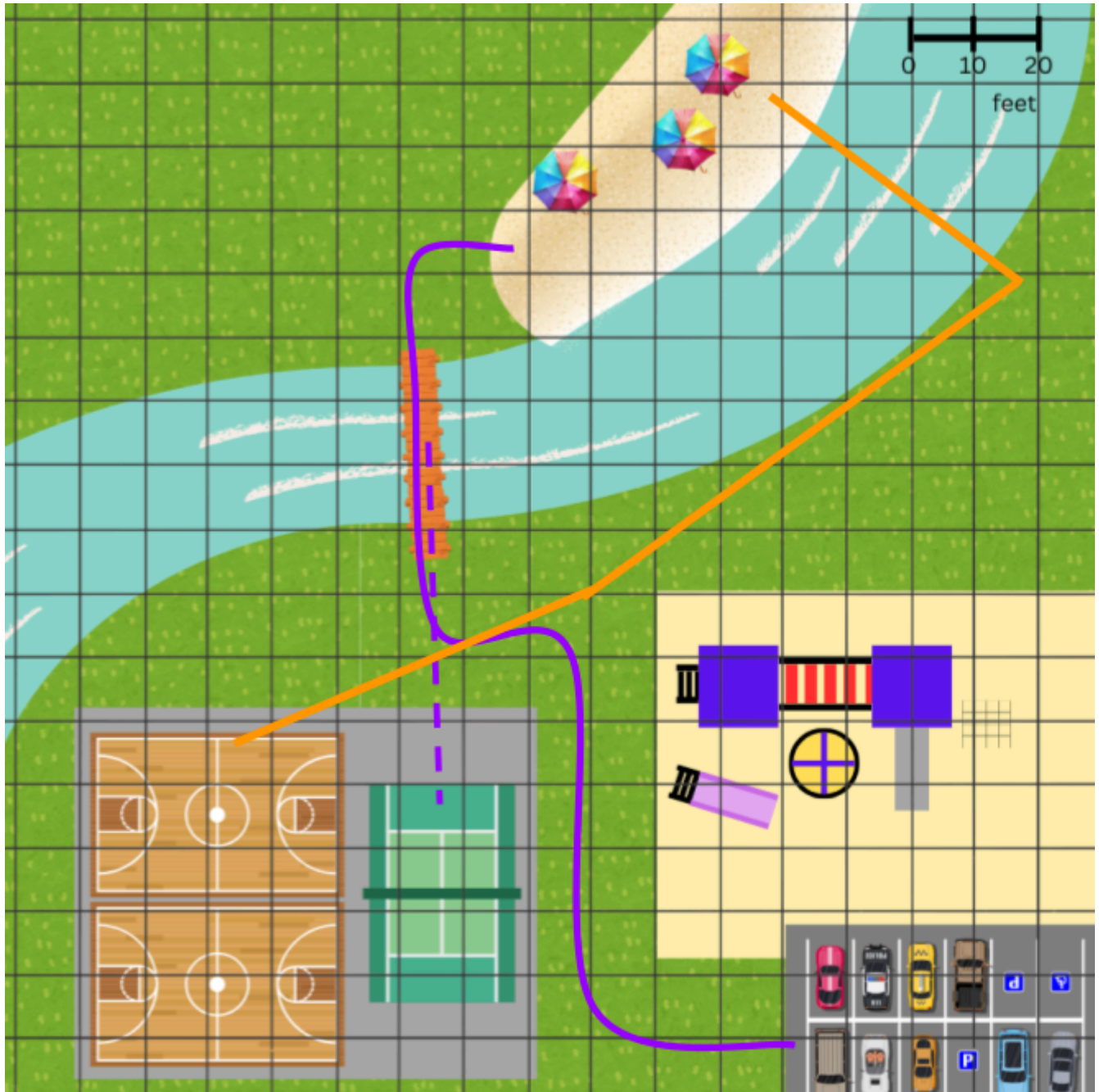
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Ari's Afternoon

Ari gets all spun around on the merry-go-round. Help Ari orient themselves to the map so they can find their way.

- 1 Knowing that the tennis court is south of the bridge, orient Ari and set Ari's north so they can navigate the map.



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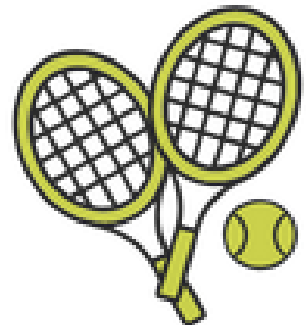
2 Ari is at the beach and hears an ice cream truck arrive in the parking lot by the playground. Ari really wants ice cream.

- Draw the path that Ari should take to get to the parking lot in the least amount of time without getting wet.
See purple line.
- Once Ari is on the bridge, what direction should Ari move?
South
- Is the bridge parallel or perpendicular to the river? Perpendicular
- After crossing the bridge, would Ari have to adjust direction at all to stay on the grass and get to the parking lot? Yes, they would have to adjust to go east.
- How far does Ari have to travel? About 180 feet



3 Ari's sister was napping under the umbrella furthest north on the beach. They decide to meet Ari at the basketball court after first swimming directly across the river. Draw a path to show Ari's sister's path. See orange line.

- What direction did she travel to cross the river? Southeast
- What direction would she travel after crossing the river to stay on the grass and walk along the river? Southwest
- When she is walking alongside the river, is she walking parallel or perpendicular to the river? Parallel



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Activity 2

What's Next for Ari?

- 1 Ari and their sister are on the tennis courts. They are deciding their options for what's next. Use Ari's compass and the map to outline their choices.

Options	What direction would they move?	How far would they travel?
Playground	East or Northeast	30 feet
Fishing from the bridge	North	50 feet
Basketball	West	10 feet
Back to the beach	North and then East	90-100 feet

- 2 They decide to go fishing from the bridge.

- Draw the path they would take to the center of the bridge.

See purple dashed line.

- They cast their fishing line directly off the eastern side of the bridge. Once it is cast, is their fishing line parallel or perpendicular to the bridge? Perpendicular
- The river seems to be flowing in the opposite direction that they cast their lines. What direction is the river flowing? East to west
- The fish are swimming right under the bridge, but Ari and their sister are not catching anything. Are the fish swimming parallel or perpendicular to the flow of the water? Parallel



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Exit Ticket

Ari and their sister spend time fishing together. After their long day, they need to get their towels that they had left on the beach and return to the parking lot to drive home. Write a set of directions that they could follow to get them there. Include distances and directions.

Sample answer below:

- Travel North about 40 feet and then east 20 feet to get your towels.
- Travel back west 20 feet and then south 60 feet to cross the bridge.
- Travel 30 feet east to avoid the playground and tennis courts and then continue 60 feet south.
- Finally, travel 40 feet east to reach the parking lot.