Name: _____ Date: _____

Reading a Map Scale

Circle group

A map shows a huge place on a small sheet of paper. So everything on it is shrunk. The map scale tells you how much. It compares a distance on the map with the real distance on the ground. A scale might say that one inch on the map is ten miles on the land.

Many maps show the scale as a small bar. Real distances are written under it. To use it, measure the space between two places with a ruler. Say two towns are three inches apart. One inch is ten miles. Multiply, and the towns are thirty miles apart.

Roads bend, so a straight ruler does not always work. Here is a trick. Lay a piece of string along the curves of the road. Then straighten the string. Hold it against the bar scale.

Scales also tell you how much detail to expect. A map of a whole country has an inch that covers hundreds of miles. It can show only the biggest cities. A map of a park has an inch that covers a few hundred feet. It can show every trail and picnic table. Say you enlarge a map on a copier. A bar scale grows with the map and stays correct. A scale written in words does not.

Questions

1. What does a map scale compare?

_____

_____

2. One inch is ten miles. Two towns are three inches apart. How far apart are they?

_____

_____

3. How can you measure a bendy road?

_____

_____

4. Which map shows more detail, a map of a country or a map of a park?

_____

_____

5. Why does a bar scale stay correct when a map is enlarged?

_____

_____

Words to know

scale: a tool that shows how map distances match real ones
distance: the amount of space between two places
multiply: to add a number to itself several times
detail: a small part or fact that makes a picture complete

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Reading a Map Scale

Triangle group

A map shows a huge place on a small sheet of paper, so everything on it has been shrunk. The map scale tells you exactly how much. It compares a distance on the map with the real distance on the ground. A scale might say that one inch on the map stands for ten miles on the land.

Many maps show the scale as a small bar divided into sections, with real distances written beneath it. To use it, you measure the space between two places with a ruler. If the distance between two towns is three inches and one inch equals ten miles, you multiply and find that the towns are thirty miles apart.

Roads usually bend, so a straight ruler does not always work. A good trick is to lay a piece of string along the curves of the road. Then you straighten the string and hold it against the bar scale.

Scales also tell you how much detail to expect. A map of a whole country uses a scale in which an inch covers hundreds of miles, so it can show only the largest cities. A map of a park uses a scale in which an inch covers a few hundred feet, so it can show every trail and picnic table. When a map is enlarged on a copier, a bar scale grows along with the map and stays correct, but a scale written in words does not.

Questions

1. What does a map scale compare?

_____

_____

2. If one inch equals ten miles, how far apart are two towns that are three inches apart on the map?

_____

_____

3. How can you measure a road that bends?

_____

_____

4. Which map would show more detail, a map of a whole country or a map of a park?

_____

_____

5. Why does a bar scale stay correct when a map is enlarged on a copier?

_____

_____

Words to know

scale: a tool that shows how map distances match real ones
distance: the amount of space between two places
multiply: to add a number to itself several times
detail: a small part or fact that makes a picture complete
enlarged: made bigger than it was

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Reading a Map Scale

Square group

A map portrays an enormous place on a small sheet of paper, which means that everything on it has been dramatically shrunk. The map scale tells you precisely how much. It compares a distance measured on the map with the actual distance on the ground, so a scale might declare that one inch on the map represents ten miles of land.

Many maps display the scale as a small bar divided into sections, with the real distances printed beneath it. To use it, you measure the space between two locations with a ruler. If the distance between two towns is three inches on the page and one inch equals ten miles, you multiply and discover that the towns are thirty miles apart.

Roads usually wind and bend, so a straight ruler does not always give a reliable answer. A clever trick is to lay a piece of string along every curve of the road, and then to straighten the string and hold it against the bar scale.

Scales also reveal how much detail to expect from a map. A map of an entire country uses a scale in which a single inch covers hundreds of miles, so it can show only the largest cities. A map of a park uses a scale in which an inch covers just a few hundred feet, so it can display every trail and picnic table. When a map is enlarged on a copier, a bar scale grows along with the map and remains accurate, but a scale expressed in words does not.

Questions

1. What two distances does a map scale compare?

_____

_____

2. If one inch equals ten miles, how far apart are two towns that are three inches apart on the page?

_____

_____

3. How can you measure a road that winds and bends?

_____

_____

4. Which map would display more detail, a map of an entire country or a map of a park, and why?

_____

_____

5. Why does a bar scale remain accurate when a map is enlarged on a copier?

_____

_____

Words to know

scale: a tool that shows how map distances match real ones
distance: the amount of space between two places
multiply: to add a number to itself several times
detail: a small part or fact that makes a picture complete
enlarged: made bigger than it was

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

For the teacher: Reading a Map Scale

Each student sheet carries a shape, not a level. The same topic and facts, written three ways.

Circle: Reading a Map Scale

Easier · 214 words · Flesch-Kincaid grade 2.8

1. A distance on the map and the real distance on the ground.
2. Thirty miles.
3. Lay a string along the curves, straighten it, and hold it against the bar scale.
4. The map of a park, because an inch covers a much smaller real distance.
5. The bar grows with the map, so it still matches real distances.

Triangle: Reading a Map Scale

This passage · 241 words · Flesch-Kincaid grade 6.6

1. A distance on the map with the real distance on the ground.
2. Thirty miles.
3. Lay a piece of string along the curves, then straighten it and hold it against the bar scale.
4. The map of a park, because an inch covers a much smaller real distance.
5. The bar grows along with the map, so it still matches the real distances.

Square: Reading a Map Scale

Harder · 258 words · Flesch-Kincaid grade 9.4

1. A distance measured on the map and the actual distance on the ground.
2. Thirty miles.
3. Lay a string along every curve, then straighten it and hold it against the bar scale.
4. The map of a park, because a single inch covers a much smaller real distance.
5. The bar grows along with the map, so it still matches the real distances.