Name: _____ Date: _____

The Tiny Ruler Printed on Every Map

Circle group

A map shows a big place on a small sheet of paper. So everything on it is shrunk. To know how far apart two places are, you need the map scale. Most maps print it in a corner. It is a small bar that looks like a ruler.

The scale bar shows how much real distance fits in one piece of the map. Say it tells you that one inch is ten miles. Two towns that are three inches apart on paper are thirty miles apart for real.

Roads bend, so a ruler is not always best. Here is how to measure a curvy road.

First, lay a string along the road on the map. Follow each bend. Next, hold the string where it ends and pull it straight. Then put it next to the scale bar and read the distance. Last, remember that the answer is a good guess, not an exact number.

A scale bar also reminds us that a map is a model. It keeps the shapes and the order of places, but it makes them small enough to hold.

Questions

1. Where do most maps print the scale?

_____

_____

2. What does the scale bar tell you?

_____

_____

3. If one inch is ten miles, how far apart are two towns three inches apart?

_____

_____

4. What is the first step in measuring a curvy road with string?

_____

_____

5. Why is string better than a ruler for a road with bends?

_____

_____

6. Why does the passage call the answer a good guess?

_____

_____

Words to know

scale: the part of a map that shows how map distance matches real distance
distance: how far apart two places are

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: _____

The Tiny Ruler Printed on Every Map

Triangle group

Every map is a shrunken picture of a huge place. To know how far apart two towns really are, you need the map's scale. Most maps print it in a corner, as a small bar that looks like a ruler.

The bar tells you how much real distance fits in one piece of the map. Say it shows that one inch stands for ten miles. Then two towns that are three inches apart on the paper are thirty miles apart on the ground.

Roads wind around, so a ruler is not always the best tool. Here is a way to measure a curvy road.

First, lay a piece of string along the road on the map. Follow every bend. Second, pinch the string where it ends and pull it straight. Third, hold it against the scale bar and read the distance. Last, remember that the answer is a good guess, not an exact number.

A scale bar is also a reminder that maps are models. They keep the shapes and the order of places, but they change the size so that we can carry them in our hands.

Questions

1. Where do most maps print the scale?

_____

_____

2. What does the scale bar tell you?

_____

_____

3. If one inch stands for ten miles, how far apart are two towns three inches apart?

_____

_____

4. What is the first step in measuring a curvy road with string?

_____

_____

5. Why is string better than a ruler for a winding road?

_____

6. Why does the passage call the answer a good guess?

Words to know

scale: the part of a map that shows how map distance matches real distance
distance: how far apart two places are
models: smaller copies that show how something really looks

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: _____

The Tiny Ruler Printed on Every Map

Square group

A map portrays an enormous area on a single sheet of paper, which means that everything on it has been shrunk. To discover how far apart two places truly are, you must consult the map's scale. Most maps print the scale in a corner, usually as a small bar that resembles a ruler.

The scale bar tells you how much real distance is represented by each piece of the map. Suppose it states that one inch stands for ten miles. In that case, two towns that are three inches apart on the paper are actually thirty miles apart on the ground.

Roads rarely run straight, so a ruler is not always the best tool for the job. Here is a method for measuring a winding road.

First, lay a piece of string along the road on the map, following every bend and curve. Second, pinch the string where it ends and pull it straight. Third, hold it against the scale bar and read off the distance. Finally, keep in mind that the result is a good estimate rather than an exact figure.

A scale bar is also a reminder that maps are models. They preserve the shapes and the arrangement of places, but they change the size so that we can carry them around in our hands.

Questions

1. Where do most maps print the scale?

_____

_____

2. What does the scale bar tell you?

_____

_____

3. If one inch stands for ten miles, how far apart are two towns three inches apart?

_____

_____

4. What is the first step in measuring a winding road with string?

_____

_____

5. Why is string a better tool than a ruler for a winding road?

_____

_____

6. Why does the passage describe the result as an estimate?

_____

_____

Words to know

scale: the part of a map that shows how map distance matches real distance
distance: how far apart two places are
winding: having many curves and turns
models: smaller copies that show how something really looks

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: The Tiny Ruler Printed on Every Map

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

Circle: The Tiny Ruler Printed on Every Map

Easier · 183 words · Flesch-Kincaid grade 2.9

1. In a corner, as a small bar that looks like a ruler.
2. How much real distance fits in one piece of the map.
3. Thirty miles.
4. Lay the string along the road and follow each bend.
5. String can follow each bend, but a ruler only measures a straight line.
6. The string and the map are not perfect, so the answer is close but not exact.

Triangle: The Tiny Ruler Printed on Every Map

This passage · 188 words · Flesch-Kincaid grade 3.8

1. In a corner, as a small bar that looks like a ruler.
2. How much real distance fits in one piece of the map.
3. Thirty miles.
4. Lay the string along the road on the map and follow every bend.
5. String can follow each bend, but a ruler only measures a straight line.
6. The string and the map are not perfect, so the measure is close but not exact.

Square: The Tiny Ruler Printed on Every Map

Harder · 217 words · Flesch-Kincaid grade 6.4

1. In a corner, usually as a small bar that resembles a ruler.
2. How much real distance each piece of the map represents.
3. Thirty miles.
4. Lay the string along the road, following every bend and curve.
5. String can follow every bend, while a ruler only measures a straight line.
6. The string and the map are not perfect, so the measure is close but not exact.