

Interstate Highway Sign



What is an Interstate Highway?

Interstate highways are special roads. There are no stop signs or traffic lights on them. Drivers enter and exit these roads at certain places called interchanges. These roads are made so people can travel quickly from one place to another without stop signs or traffic lights.

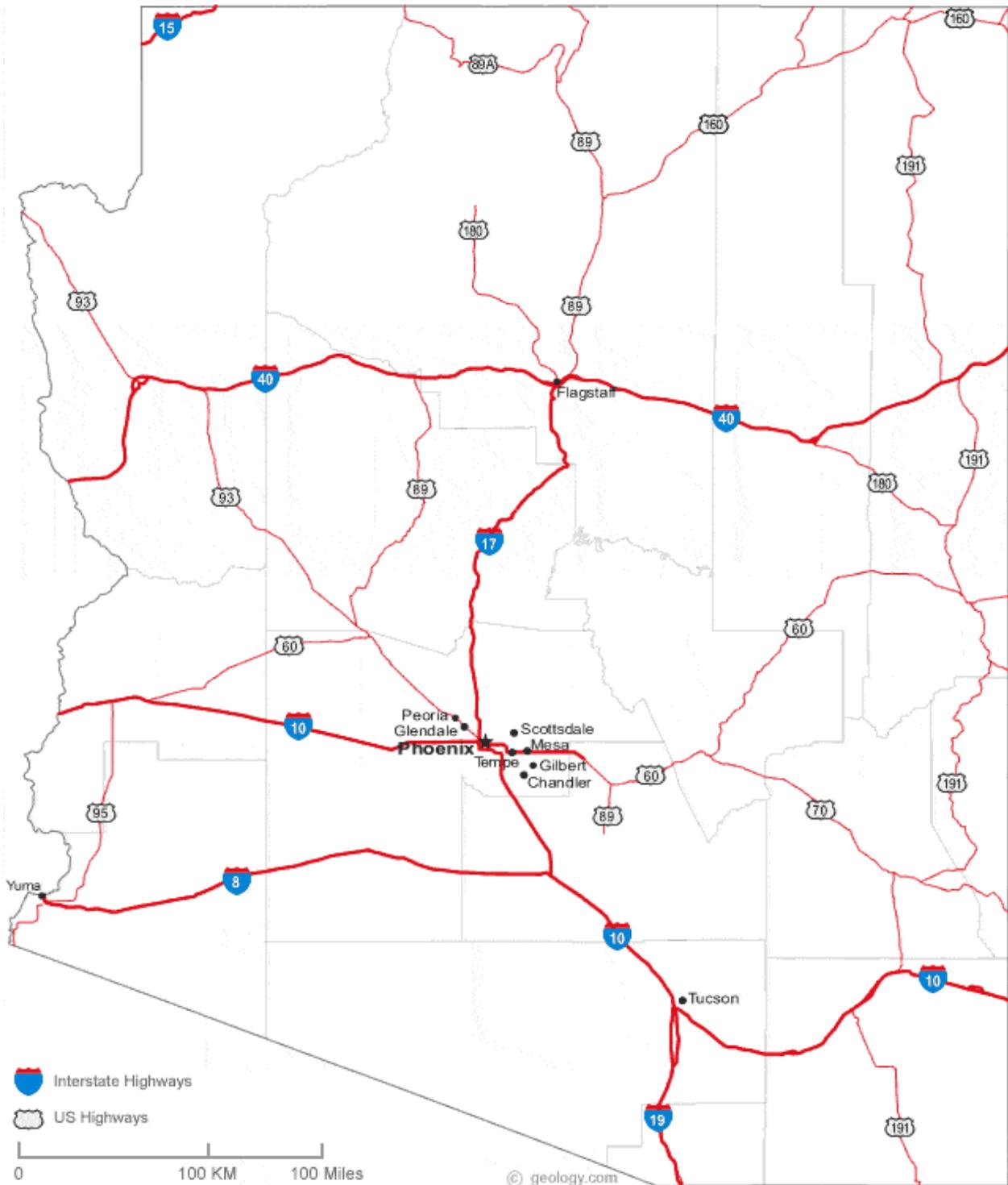
Many of our cities in Arizona are near an interstate road; some are even near two interstate roads. Interstate roads pass through other states. In Arizona people can travel to California, Nevada, Utah, or New Mexico using interstate highways. Arizona also has an interstate road that goes south to the country of Mexico.

The interstate sign is shaped like a shield and is red on the top and blue on the bottom. There are six interstate roads in Arizona. The "I" before the number means interstate. The number after the "I" indicates which direction the road travels. If it is an even number, it travels east-west. If it is an odd number, it travels north-south.

The six interstate roads in Arizona are: I-8, I-10, and I-40; I-15, I-17, and I-19. Let's find them on a map!

Use the 2 Stars and a Car! Student Map. Locate the six interstate highways in Arizona.

<https://geology.com/state-map/arizona.shtml>



Symbols on Interstate Roads

- 1) This line is the symbol of an interstate highway. It is red and is a solid line.



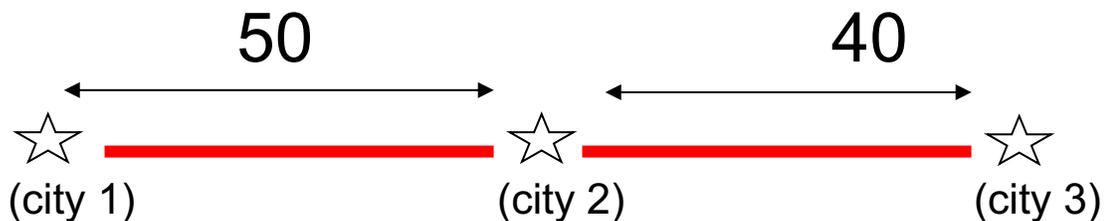
- 2) The stars show the beginning and end points on a trip.



- 3) 50 means the interstate highway is 50 miles between the star on the left and the star on the right. This number is usually in red.



- 4) There are 50 miles between city 1 and city 2. There are 40 miles between city 2 and city 3. There are 90 miles between city 1 and city 3. Add the mileage ($50 + 40$) to get the total mileage (90 miles).



Symbols on Interstate Roads

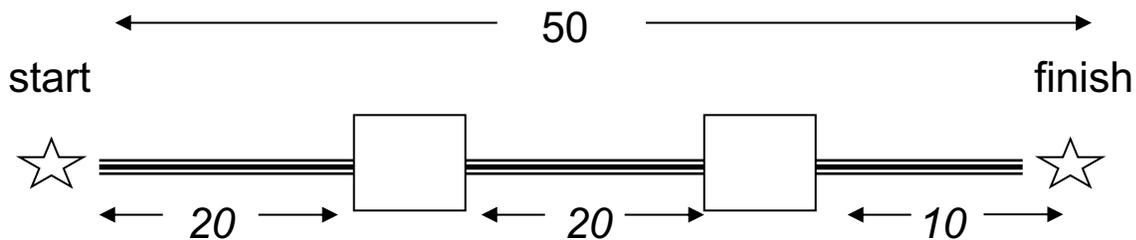
Teacher Note: The interchanges between the stars will not be covered in this lesson. However, if students ask what the square boxes mean on an interstate road map, please refer to this page.

Interchanges Between the Stars (Cities)

Sometimes travelers enter or exit the interstate between major cities. Interstate highways have square boxes along the routes. These squares are also where travelers enter or leave the highway. They are called an interchange or exit.

The numbers below are the miles between the interchanges. Add them together to find the total mileage between the 2 stars.

Example:



Start at the first star and travel 20 miles. You come to the exit (first box). You go 20 miles more and come to next exit (second box). You go 10 more miles and come to the last star, which is where you finish. This is your destination.

You have traveled $20 + 20 + 10 = 50$ miles. You had the opportunity to exit or get off the interstate at four places – at the 2 stars or at the 2 boxes between the stars.

Math Activity

Name _____

Use your map to determine how many miles there are between these 2 cities.

Kingman to Flagstaff _____ miles

Flagstaff to Phoenix _____ miles

Nogales to Tucson _____ miles

Phoenix to Tucson _____ miles

Flagstaff to Winslow _____ miles

How many miles is it to go from these cities?

Tucson to Phoenix _____ miles + Phoenix to Flagstaff _____ miles = _____ total miles

Winslow to Flagstaff _____ miles + Flagstaff to Kingman _____ miles = _____ total miles

Kingman to Flagstaff _____ miles + Flagstaff to Phoenix _____ miles = _____ total miles

What is the **total mileage** to go from Winslow to Phoenix? _____ miles

What is the **total mileage** to go from Nogales to Phoenix? _____ miles

What is the **total mileage** to go from Nogales to Flagstaff? _____ miles

What is the **total mileage** to go from Kingman to Tucson? _____ miles

Math Activity **Answer Key**

Use your map to determine how many miles there are between these 2 cities.

Kingman to Flagstaff ___ 143 ___ miles Flagstaff to Phoenix ___ 146 ___ miles

Nogales to Tucson ___ 63 ___ miles Phoenix to Tucson ___ 111 ___ miles

Flagstaff to Winslow ___ 58 ___ miles

How many miles is it to go from these cities?

Tucson to Phoenix ___ 63 ___ miles + Phoenix to Flagstaff ___ 146 ___ miles = ___ 209 ___
total
miles

Winslow to Flagstaff ___ 58 ___ miles + Flagstaff to Kingman ___ 143 ___ miles = ___ 201 ___
total
miles

Kingman to Flagstaff ___ 143 ___ miles + Flagstaff to Phoenix ___ 146 ___ miles = ___ 289 ___
total
miles

What is the total mileage to go from Winslow to Phoenix? ___ 204 ___ miles

What is the total mileage to go from Nogales to Phoenix? ___ 174 ___ miles

What is the total mileage to go from Nogales to Flagstaff? ___ 320 ___ miles

What is the total mileage to go from Kingman to Tucson? ___ 400 ___ miles

Assessment

Name _____

Circle the correct letter (a, b, or c). Use your student map to answer these questions.

1. The interstate highway is found on what kind of map?
 - a. product map
 - b. road map
 - c. weather map

2. Phoenix is our capital city. One interstate that goes through our capital city is:
 - a. I-8
 - b. I-10
 - c. I-40

3. What interstate highway in Arizona goes to the country of Mexico?
 - a. I-19
 - b. I-40
 - c. I-8

4. How many interstate roads go into California from Arizona?
 - a. 1
 - b. 2
 - c. 3

5. I-40 goes through the cities of Kingman, Flagstaff, and
 - a. Phoenix
 - b. Winslow
 - c. Tucson

6. To find the total mileage you
 - a. add the miles together.
 - b. subtract the miles.
 - c. multiply the miles.

7. The mileage between Kingman and Winslow is 143 miles plus
 - a. 58 miles
 - b. 146 miles
 - c. 63 miles

8. The mileage between Tucson and Nogales is
 - a. 111 miles
 - b. 63 miles
 - c. 58 miles

9. The total mileage between Phoenix and Nogales is
 - a. 111.
 - b. $111 + 63$.
 - c. $111 + 50$.

10. You get the total mileage between Kingman and Phoenix by
 - a. Adding $143 + 146$.
 - b. Subtracting $143 - 146$.
 - c. Multiplying 143×2 .

Assessment ANSWER KEY

1. The interstate highway is found on what kind of map?
 - a. product map
 - b. road map**
 - c. weather map
2. Phoenix is our capital city. One interstate that goes through our capital city is:
 - a. I-8
 - b. I-10**
 - c. I-40
3. What interstate highway in Arizona goes to the country of Mexico?
 - a. I-19**
 - b. I-40
 - c. I-8
4. How many interstate roads go into California from Arizona?
 - a. 1
 - b. 2
 - c. 3**
5. I-40 goes through the cities of Kingman, Flagstaff, and
 - a. Phoenix
 - b. Winslow**
 - c. Tucson
6. To find the total mileage you
 - a. add the miles together.**
 - b. subtract the miles.
 - c. multiply the miles.
7. The mileage between Kingman and Winslow is 143 miles plus
 - a. 58 miles**
 - b. 146 miles
 - c. 63 miles
8. The mileage between Tucson and Nogales is
 - a. 111 miles
 - b. 63 miles**
 - c. 58 miles
9. The total mileage between Phoenix and Nogales is
 - a. 111.
 - b. 111 + 63.**
 - c. 111 + 50.
10. You get the consolidated mileage between Kingman and Phoenix by
 - a. Adding 143 + 146.**
 - b. Subtracting 143 – 146.
 - c. Multiplying 143 x 2.

Optional Extension Activity

Mileage Chart of 6 Cities on the Interstate Roads*

AZ Cities	Flagstaff	Kingman	Nogales	Phoenix	Tucson	Winslow
Flagstaff	X	143	320	146	257	58
Kingman	143	X	360	289	297	201
Nogales	320	360	X	174	63	378
Phoenix	146	289	174	X	111	204
Tucson	257	297	63	111	X	315
Winslow	58	201	378	204	315	X

*Note: these are estimates. Mileage may vary depending on the roads driven and./or maps used. These figures are based only on driving the interstate roads.