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.
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

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
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 x 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*

<table>
<thead>
<tr>
<th>AZ Cities</th>
<th>Flagstaff</th>
<th>Kingman</th>
<th>Nogales</th>
<th>Phoenix</th>
<th>Tucson</th>
<th>Winslow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flagstaff</td>
<td>X</td>
<td>143</td>
<td>320</td>
<td>146</td>
<td>257</td>
<td>58</td>
</tr>
<tr>
<td>Kingman</td>
<td>143</td>
<td>X</td>
<td>360</td>
<td>289</td>
<td>297</td>
<td>201</td>
</tr>
<tr>
<td>Nogales</td>
<td>320</td>
<td>360</td>
<td>X</td>
<td>174</td>
<td>63</td>
<td>378</td>
</tr>
<tr>
<td>Phoenix</td>
<td>146</td>
<td>289</td>
<td>174</td>
<td>X</td>
<td>111</td>
<td>204</td>
</tr>
<tr>
<td>Tucson</td>
<td>257</td>
<td>297</td>
<td>63</td>
<td>111</td>
<td>X</td>
<td>315</td>
</tr>
<tr>
<td>Winslow</td>
<td>58</td>
<td>201</td>
<td>378</td>
<td>204</td>
<td>315</td>
<td>X</td>
</tr>
</tbody>
</table>

*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.