

Set A1 ★ Independent Worksheet 3



INDEPENDENT WORKSHEET

Travel Miles

Compatible numbers are numbers that work well together. If a pair of numbers is easy to add or subtract, those numbers are *compatible*. When you're solving problems, you can check to see if your answers are reasonable by changing the actual numbers to compatible numbers.

The chart below shows the travel miles between several cities in the U.S.

U.S. Cities	Denver	Houston	Orlando	Nashville	Philadelphia	San Francisco
Denver		875 miles	1,858 miles	1,023 miles	1,575 miles	956 miles
Houston	875 miles		960 miles	663 miles	1,336 miles	1,647 miles
Orlando	1,858 miles	960 miles		686 miles	992 miles	2,887 miles
Nashville	1,023 miles	663 miles	686 miles		681 miles	1,969 miles
Philadelphia	1,575 miles	1,336 miles	992 miles	681 miles		2,526 miles
San Francisco	956 miles	1,647 miles	2,887 miles	1,969 miles	2,526 miles	

Use the information on the chart to solve the problems on the following pages.



1 Use the chart of travel miles on the previous page to solve the problems below. For each one, show your work. Then use compatible numbers to explain why your answer is reasonable. The first one is done for you.

Question	My Work	My answer is reasonable because
<p>example Mr. Buck and Ms. Penny both live in Houston and work for a video game company. On Monday, Mr. Buck flew to Orlando and Ms. Penny flew to San Francisco for business meetings. How much farther did Ms. Penny travel than Mr. Buck?</p>	$\begin{array}{r} 1,647 \\ - 960 \\ \hline 687 \end{array}$ <p>Ms. Penny traveled 687 miles farther than Mr. Buck.</p>	<p>My answer is reasonable because 1,647 is close to 1,650 and 960 is close to 950.</p> <p>$1,650 - 950 = 700$. My answer is 687, and that's really close to 700.</p>
<p>a Anna's family lives in Houston. They're trying to decide whether to go to Nashville or Orlando for a vacation next summer. Which city is farther from Houston? How much farther is it?</p>		
<p>b Mrs. Polanco has to fly from San Francisco to Denver and back home again in October. She has to fly from San Francisco to Orlando and back home again in November. How much farther does she have to fly in November than in October?</p>		

NAME _____

DATE _____

Independent Worksheet 3 Travel Miles (cont)

Question	My Work	My answer is reasonable because
<p>c How much farther is it to fly from San Francisco to Philadelphia and back, than to fly from Denver to Houston to Orlando and then back to Denver?</p>		
<p>d The Houston Astros are flying from Houston to San Francisco to play a baseball game with the Giants on Friday. Next, they're flying from San Francisco to Denver to play a game with the Colorado Rockies. After that, they have to fly from Denver to Philadelphia to play the Phillies. Then they're flying from Philadelphia back home to Houston. How many miles do they have to travel in all?</p>		

2 Plan an imaginary trip. You can start in any city you want and fly to as many places as you want, but your travel miles have to total between 9,000 and 10,000 miles, including the return trip to your starting city. Show your travel plan on the back of this page and prove that your mileage isn't less than 9,000 or more than 10,000 miles in all.