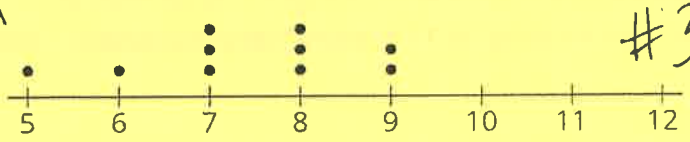
NAME DATE PERIOD

Unit 8, Lesson 5: Using Dot Plots to Answer Statistical Questions

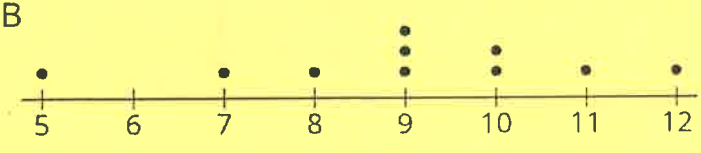
1. Three sets of data about ten sixth-grade students were used to make three dot plots. The person who made these dot plots forgot to label them. Match each dot plot with the appropriate label.

A



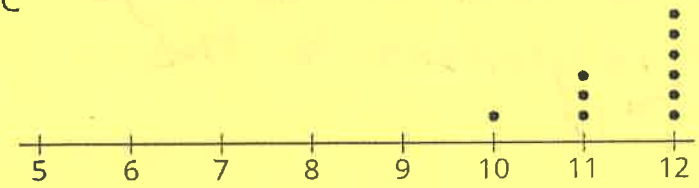
#3

B



#2

C

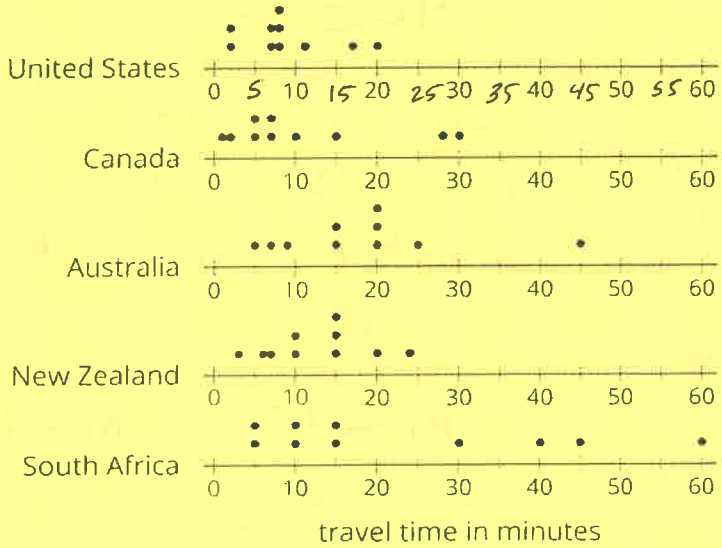


#1

1. Ages in years - should be 10-12 C
2. Numbers of hours of sleep on nights before school days Hopefully more on school nights B
3. Numbers of hours of sleep on nights before non-school days Less than school nights

1/3

2. The dot plots show the time it takes to get to school for ten sixth-grade students from the United States, Canada, Australia, New Zealand, and South Africa.



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shortest NZ Can

a. List the countries in order of *typical travel times*, from shortest to longest.

US Can NZ Aus SA

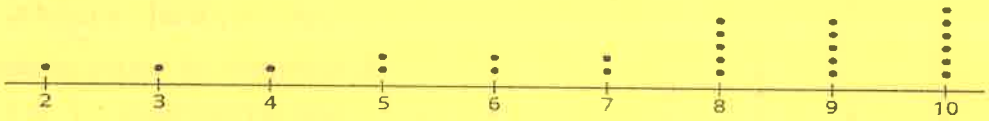
b. List the countries in order of *variability in travel times*, from the least variability to the greatest.

Least Can NZ Greatest

US NZ Can Aus S Afriq

clumped spread

3. Twenty-five students were asked to rate—on a scale of 0 to 10—how important it is to reduce pollution. A rating of 0 means "not at all important" and a rating of 10 means "very important." Here is a dot plot of their responses.



importance of reducing pollution

Explain why a rating of 6 is *not* a good description of the center of this data set.

Even though it is the center of the range there are way more responses to the right of 6 → 18

4. Tyler wants to buy some cherries at the farmer's market. He has $10 and cherries cost $4 per pound.

a. If c is the number of pounds of cherries that Tyler can buy, write one or more inequalities or equations describing c.

$4c \leq \$10$

b. Can 2 be a value of c? Can 3 be a value of c? What about -1? Explain your reasoning.

2 yes $2 \cdot 4 = 8 < 10$

3 no $3 \cdot 4 = 12 > 10$

-1 no negative pounds doesn't make sense

c. If m is the amount of money, in dollars, Tyler can spend, write one or more inequalities or equations describing m.

$m < 10$ $m = 10$

d. Can 8 be a value of m? Can 2 be a value of m? What about 10.5? Explain your reasoning.

yes $8 < 10$

yes $2 < 10$

no $10.5 > 10$