Name _____ Date _____

Spreading Out I

Picture

Draw a picture of the lab setup.
Remember to label all the variables in your picture.

1. What is the manipulated variable? _____

   _____

2. What are the values of the manipulated variable? _____

   _____

3. What is the responding variable? _____

_____

4. What variables should be held fixed? _____

_____

Data Table

Work with your partner to do the experiment.
Use 3 drops of water for each spot on each towel.
Record your data in the table below. Be sure to use proper units.

Table I

T Type of Towel	A Area in _____ units			
	Trial 1 Partner 1	Trial 2 Partner 2	Trial 3 Both	Eyeball Average <A>

Graph

Make a bar graph of your data. Label each axis.

5. Why should you make a bar graph?

_____

_____

_____

6. On which axis does towel type go?

_____

7. Does it matter which type of towel appears first on your graph?

_____

Comprehension Questions

8. Which towel has the largest spot area?

_____

9. Which towel has the smallest spot area?

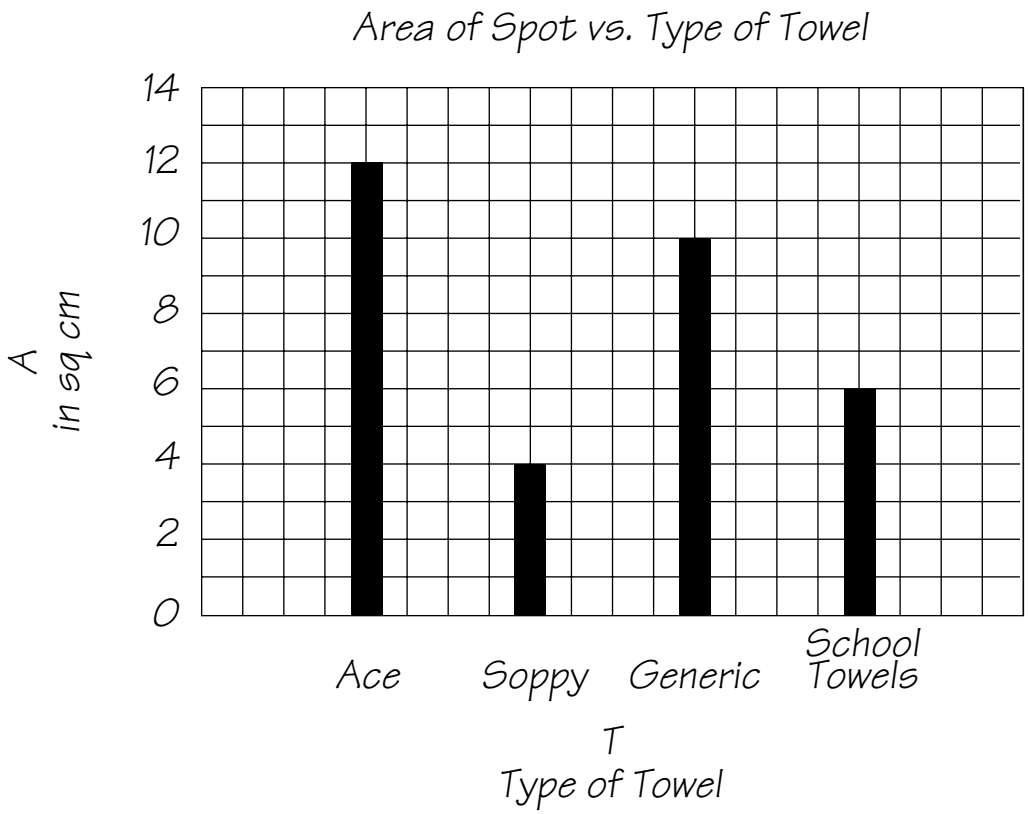
_____

10. How would the graph look if you dropped twice as many drops on each towel?

_____

_____

11. Lori does the experiment using 2 drops on 4 types of towels. Her graph is shown below.



11a. Which towel had the biggest spot?

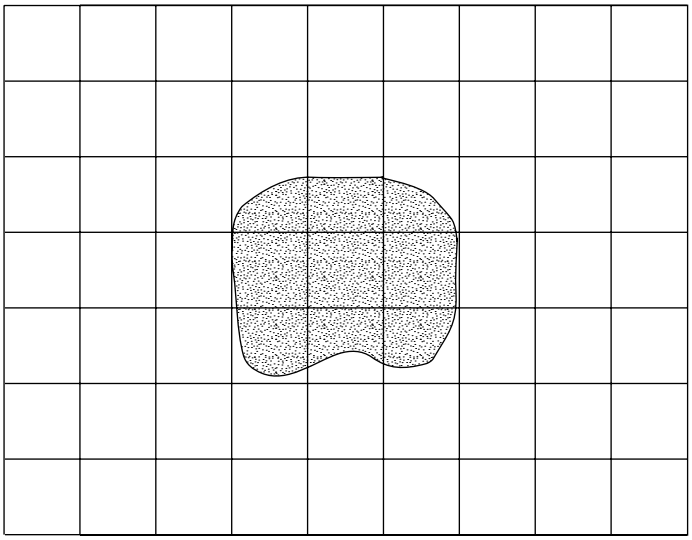
_____

11b. Which towel had a spot of 10 sq cm?

_____

12. Here is one of Lori's spots. She forgot to label it. Which towel is it for?

_____



13. How many drops would it take to cover each of <u>your</u> towels with water?

Towel type	Number of drops to cover total towel
_____	_____
_____	_____
_____	_____

14a. Which of <u>your</u> towels will wipe up the most water?

_____

14b. Complete the following sentence:

The _____ the spot, the more water a towel will wipe up.

15. Why do you think some paper towels are made double in thickness?

_____

_____

_____

Let's see if we can find out by doing another experiment.
Fold the worst and best types of towels in half (dry ones).
Use 3 drops of water as you did before. Put your data in the table below.

Folded Towels

T Type of Towel		A Area in _____ units			
		Trial 1	Trial 2	Trial 3	Eyeball Average <A>
Worst					
Best					

Compare your bar graph for folded towels with your first graph.
What difference did folding the towels make?

_____

_____

✶ 16. If Soppy Towels cost 2¢ a sheet and Generic Towels cost 1¢ a sheet, can you tell which is a better buy?

_____