## Unit 8 Lesson 1 Cumulative Practice Problems

1. Lin is interested in how many of her classmates watch her favorite TV show, so she starts asking around at lunch. She gets the following responses:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| * yes
 | * yes
 | * yes
 | * no
 | * no
 | * no
 | * no
 | * no
 |
| * no
 | * no
 | * yes
 | * no
 | * no
 | * no
 |  |  |

*
* If she asks one more person randomly in the cafeteria, do you think they will say “yes” or “no”? Explain your reasoning.
1. An engineer tests the strength of a new material by seeing how much weight it can hold before breaking. Previous tests have held these weights in pounds:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| * 1,200
 | * 1,400
 | * 1,300
 | * 1,500
 | * 950
 | * 1,600
 | * 1,100
 |

*
* Do you think that this material will be able to hold more than 1,000 pounds in the next test? Explain your reasoning.
1. A company tests two new products to make sure they last for more than a year.
	* Product 1 had 950 out of 1,000 test items last for more than a year.
	* Product 2 had 150 out of 200 last for more than a year.
* If you had to choose one of these two products to use for more than a year, which one is more likely to last? Explain your reasoning.
1. Put these numbers in order from least to greatest.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| * $\frac{1}{2}$
 | * $\frac{1}{3}$
 | * $\frac{2}{5}$
 | * 0.6
 | * 0.3
 |

*
*
1. A small staircase is made so that the horizontal piece of each step is 10 inches long and 25 inches wide. Each step is 5 inches above the previous one. What is the surface area of this staircase?
* 
* (From Unit 7, Lesson 15.)



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