Applying Statistics
Worksheet 2

Choice *E*, in multiple-choice questions, is always: *I request help from the teacher*.

You may mark E in addition to one other choice if you think that you have the right answer to the question but you do not feel that you have a complete understanding of the problem.

Your teacher will decide whether to use the two-point or four-point scoring rubric for problems that use numbers, pictures, or words to justify/explain your answer(s). You may request help for these questions, too. Write the word "teacher" by your answer(s).

1. A standard deck of playing cards has 52 cards, evenly distributed among four suits: spades, hearts, diamonds, and clubs. What is the probability of drawing a spade in a single draw?

   A. 4 B. $\frac{1}{4}$ C. $\frac{2}{3}$ D. $\frac{1}{2}$ E. Teacher

2. In exercise #1 what is the probability of drawing the 2 of spades?

   A. $\frac{1}{52}$ B. $\frac{1}{4}$ C. $\frac{3}{4}$ D. $\frac{1}{13}$ E. Teacher

3. In a classroom of 25 students, it is observed that 20 have brown eyes, 2 students have green eyes, and the rest have blue eyes. If you write all of the students' names on slips of paper and place them in a box, what is the probability of choosing a blue eyed student's name in a single draw?

   A. $\frac{3}{25}$ B. $\frac{20}{25}$ C. $\frac{22}{25}$ D. not enough information E. Teacher

4. Pythagleo needed to change some of the burned out light bulbs at Etna High. The fine print on the box from the Bright Lite Bulb Company said that, on the average, 1% of their light bulbs are defective. The box Pythagleo opened had 100 light bulbs. The first bulb he used worked just fine. It was not defective. What is the probability that the second bulb he uses will be defective and will not work?

   A. 1% B. 99% C. 98% D. 2% E. Teacher

5. Pythagleo has programmed 8 phone numbers into his phone. By pressing a 1, 2, 3, 4, 5, 6, 7 or 8 one of his friend's phone numbers would be automatically dialed. Pythagleo knows that his best friend's number was programmed as one of the even numbers, but forgot which one. If he randomly presses an even number, what is the probability that he pressed the correct speed dial button for his best friend on the first try?

   A. $\frac{1}{8}$ B. $\frac{5}{8}$ C. $\frac{1}{2}$ D. $\frac{4}{9}$ E. Teacher

6. A regular, two-sided coin is tossed nine times, falling heads up on each toss. What is the probability of the next toss being a tails up?

A. $\frac{1}{2}$ B. $\frac{1}{10}$ C. $\frac{9}{10}$ D. 1 E. Teacher

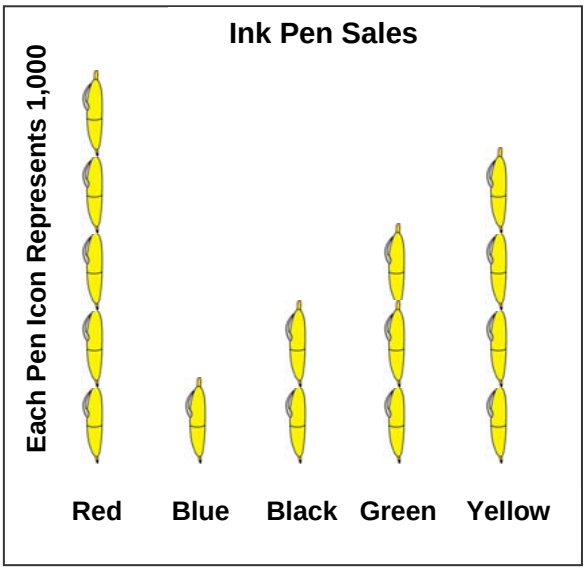
7. Diane has a list of four numbers. The mode is 5, the median is 6, and the mean is 7. What are the four possible numbers?

A. 5, 5, 6, 11 B. 5, 5, 7, 11 C. 5, 5, 6, 7 D. 5, 6, 7, 11 E. Teacher

Use the pictograph for exercises #8-#10.

8. What is the total number of pens illustrated in the pictograph?

A. 15
B. 15,000
C. 4,000
D. 7,500
E. Teacher



9. What color represents the mode?

A. Red
B. Blue
C. Black
D. Green
E. Teacher

10. What is the mean number of pens sold?

A. 3 B. 3,000 C. 5 D. 15,000 E. Teacher