7th Grade Pre-Algebra STAAR Practice Week 3
TEKS 7.6H Mastery Machine Day 1

Score: __________/5 __________%  Mastery?: Yes__________ : No__________

1) Deborah surveyed customers in a restaurant to find out their favorite meal. The results of the survey are shown in the table.

<table>
<thead>
<tr>
<th>Favorite Meals</th>
<th>Number of People</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hamburger and french fries</td>
<td>17</td>
</tr>
<tr>
<td>Spaghetti</td>
<td>8</td>
</tr>
<tr>
<td>Chili</td>
<td>12</td>
</tr>
<tr>
<td>Vegetarian delight</td>
<td>3</td>
</tr>
</tbody>
</table>

One person in the restaurant will be picked at random. Based on the given information, which statement is true?

A. This person’s favorite meal is twice as likely to be hamburger and french fries as it is to be spaghetti.

B. This person’s favorite meal is four times as likely to be chili as it is to be vegetarian delight.

C. This person’s favorite meal is more likely to be chili than hamburger and french fries.

D. This person’s favorite meal is equally likely to be either vegetarian delight or spaghetti.

2) The defective rate for phone chargers is 1.5%

The store manager ordered 250 chargers on Monday. How many of the ordered phone chargers will be defective based on this information?

A. 38 defective phone chargers

B. 5 defective phone chargers

C. 4 defective phone chargers

D. 2 defective phone chargers
3) JoAnna will roll a fair number cube 90 times. How many times can she expect to roll a number greater than or equal to 5?

F. 10 times
G. 15 times
H. 30 times
J. 45 times

4) Raymond caught the football 28 out of 35 times at practice. Predict the number of times he will catch the football during the game if it is thrown to him 20 times.

A. 11 times
B. 12 times
C. 14 times
D. 16 times
4. On average, a restaurant experiences a 4% cancellation rate on dinner reservations. If the restaurant has 400 dinner reservations, how many reservations can they expect to serve?

F. 16 reservations
G. 84 reservations
H. 316 reservations
J. 384 reservations
1) At a local store, the manager recorded the number of times different phone plans were chosen during one week. Based on his data, how many times can he expect Plan B or Plan C to be chosen during a one-year time span?

<table>
<thead>
<tr>
<th>Phone Plans</th>
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<tbody>
<tr>
<td>Plan Choices</td>
</tr>
<tr>
<td>Plan A</td>
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<tr>
<td>Plan B</td>
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<tr>
<td>Plan C</td>
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<tr>
<td>Plan D</td>
</tr>
</tbody>
</table>

F. 4,836 times
G. 1,116 times
H. 1,302 times
J. 4,464 times

2) An on-line store fills 7,500 orders per month. On average, 3% of on-line orders are returned by consumers. How many orders are kept by consumers during a one-month time span?

Record your answer and fill in the bubbles. Be sure to use the correct place value.
3) Fifty bins of 420 light bulbs were delivered to a hardware store. The hardware company will not accept bins that contain more than 5% defective bulbs. If 4% of the bins were returned, how many bins were accepted?

F. 2 bins
G. 48 bins
H. 30 bins
J. 50 bins

4) Bush Junior High School wants to maintain a 98% or higher attendance rate for the year. The campus has 900 enrolled students. On an average day, what is the required number of students who must be in attendance for the school to meet the goal?

A. 882 students
B. 890 students
C. 898 students
D. 880 students
5) 10. A major department store mailed 1,500 postcards offering a 25% discount on any single item. They predict 45% of the coupons will be used at the store. How many people will shop and save based on this prediction?

Record your answer and fill in the bubbles. Be sure to use the correct place value.
1) A picnic cooler contains 5 lemon-lime sodas, 8 colas, 2 diet colas, and 6 root beers. The likelihood of randomly selecting a diet cola instead of a root beer would be described as—
   A  certain
   B  impossible
   C  likely
   D  unlikely

2) The table below shows the number and grade level of the girls and boys attending a middle school.

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Girls</th>
<th>Boys</th>
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<tbody>
<tr>
<td>6</td>
<td>72</td>
<td>54</td>
</tr>
<tr>
<td>7</td>
<td>65</td>
<td>81</td>
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<tr>
<td>8</td>
<td>59</td>
<td>60</td>
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</table>

If the school's principal randomly selects one student from each grade to read the morning announcements, he is—
   A  more likely to select a girl than a boy at all three grade levels
   B  unlikely to select a seventh-grade boy over a seventh-grade girl
   C  equally likely to select a sixth-grade boy or a sixth-grade girl
   D  more likely to select a seventh-grade boy than a seventh-grade girl
3) A total of 19 convertibles, 25 trucks, 21 muscle cars, 36 sedans, and 12 SUVs are registered for a race. If a vehicle is chosen at random to be the lead car for the race, which statement below is correct?

A  A sedan is less likely to be the lead car than an SUV.
B  A sedan is more likely to be the lead car than an SUV.
C  A sedan is certain to be the lead car instead of an SUV.
D  A sedan and an SUV are equally likely to be the lead car.

4)

5) Ethan found the spinner shown below and planned to use it for a game.

![Spinner Diagram]

After studying the spinner before using it, Ethan correctly concluded that the spinner was—

A  least likely to land on 2
B  least likely to land on 5
C  most likely to land on 3
D  most likely to land on 2
1) How many times would you expect the spinner to **not** land on blue if the spinner is spun 80 times? (7.6H, RC1, RS)

![Spinners]

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

<p>| | | | | |</p>
<table>
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2) Sally has a bag of marbles.

![Marbles]

Sally draws a marble from the bag 60 times and replaces the marble each time. Sally predicts that she will draw a pink marble 40 times. Is she correct in her thinking? (7.6H, RC1, RS)

- **F** Yes, because there are 4 pink marbles and $4 \times 10 = 40$.
- **G** No, because there are 4 pink marbles and $\frac{4}{12} \times 60 = 20$.
- **H** Yes, because there are 4 pink marbles and $\frac{3}{5} \times 60 = 40$.
- **J** No, because there are 4 pink marbles and $4 \times 60 = 240$. 
3) Sally draws a marble 20 times and replaces the marble each time.

Sally states that she will draw a blue marble more times than any other color. Is she correct in her thinking? (7.6H, RC1, RS)

F Yes, because the probability of drawing a blue marble is greater than the probability of drawing any other color marble.
G No, because the probability of drawing a blue marble is less than the probability of drawing any other color marble.
H Yes, because blue is Sally’s favorite color.
J No, because there are only 5 blue marbles out of the total 12 marbles in the bag.

4) Tayna is making a birthday card. She has a package of paper with 4 red, 3 blue, 6 purple, 2 white, and 1 orange piece of paper. How likely is it that Tayna will randomly select a piece of white paper? (7.6H, RC1, RS)

A Impossible
B As likely to happen as not
C Likely
D Certain

5) Susan has a 60% free throw accuracy on her basketball team this year. If she shoots 60 free throws, how many will she make? (7.6H, RC1, RS)

A 6
B 10
C 120
D 36
1) 1. Alex spun a spinner forty times and recorded his results.

<table>
<thead>
<tr>
<th>Spinner Number</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>3</td>
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</tbody>
</table>

Based on Alex’s results, what is the probability that the spinner will land on number 4 on the next spin?

A. 45%
B. 30%
C. 15%
D. 3%

2) 2. Fred has a white number cube and a black number cube. The faces of the cubes are numbered 1 through 6. Fred will roll each cube one time. What is the probability that the white cube will land on an odd number, and the black cube will land on a number less than 5?

F. $\frac{1}{3}$
G. $\frac{1}{36}$
H. $\frac{1}{6}$
J. $\frac{1}{9}$
3) James is selecting a marble. His choices are shown below.

James chooses a marble at random and then replaces it. He then selects a second marble at random. What is the probability that James selects a striped marble both times?

A. \( \frac{2}{5} \)  
C. \( \frac{4}{5} \)

B. \( \frac{8}{100} \)  
D. \( \frac{4}{25} \)

4) Maya tosses three quarters. What is the probability that all three coins will land heads up?

F. \( \frac{1}{2} \)  
G. \( \frac{1}{3} \)

H. \( \frac{1}{4} \)  
J. \( \frac{1}{8} \)
5) Mildred has a bag of coins. The bag contains 10 dimes, 5 nickels, and 1 penny. She will randomly select 2 coins from the bag one at a time without replacement. What is the probability that Mildred will select a dime first and then a penny?

A \[
\frac{83}{120}
\]

B \[
\frac{11}{16}
\]

C \[
\frac{5}{128}
\]

D \[
\frac{1}{24}
\]