SmartMathz

Probability of a Chance Event

Grade 7 Probability & Data Worksheet
Date:_____ Name:_____

LET'S PRACTICE WITH PROBABILITY OF A CHANCE EVENT
Solve the following problems

1. Alex has a cap box. The box contains 7 blue caps, 5 green caps, and 8 pink caps. Without looking, if Zayn chooses a cap from the box, what is the probability of selecting a green cap?

2. Lucy has a basket. She has 30 candies, of which 15 are orange candy. What is the probability that a randomly selected candy will be an orange candy?

3. Dan tosses a coin 30 times, this results in 12 heads and 18 tails; We define a heads as a success. What is the probability of heads?

4. A menu has 6 different sandwiches, with 3 choices of potato chips, 3 types of salad and 5 different beverages. How many different lunch combinations consisting of a sandwich, chips and beverage can be ordered?

5. What is Theoretical Probability?

a. What should happen	b. What does happen
c. What will happen	d. What actually happens

6. What is Experimental Probability?

a. What should happen	b. What does happen
c. What will happen	d. What actually happens

7. Declan has a carton with 10 clocks in it. 4 are alarm clocks. What is the relative frequency probability that a randomly selected clock will be an alarm clock?

8. James has lots of bags. There are three types of bags that he collects travel bags, hand bags and school bags. If the probability of getting a travel bag is $\frac{5}{10}$ and the probability of getting hand bag is $\frac{4}{10}$; what is the relative frequency probability of getting a school bag?

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Answers

Hint: The relative frequency probability of an event is the ratio of the number of times the event occurs to the total number of trials or opportunities.
Experimental probability means you count the number of occurrences of the event and divide it by the total number of trials.
Probability formulas are used to calculate the probabilities of events. Finding the probability of an event A happening can be calculated using the formula.

$$P(A) = \frac{\text{Number of times A occurs}}{\text{Total number of possible outcomes}}$$

$P(\text{not A}) = 1 - P(A)$

For mutually exclusive events: $P(\text{A or B}) = P(A) + P(B)$

For independent events: $P(\text{A and B}) = P(A) \times P(B)$

1. $\frac{1}{4}$
2. $\frac{1}{2}$
3. $\frac{2}{5}$
4. 270
5. A
6. B
7. $\frac{4}{10}$ or 0.4
8. $\frac{1}{10}$