

Name \_\_\_\_\_

Date \_\_\_\_\_

**Calculating the Payoff of a Game of Chance - Independent Practice Worksheet**

Complete all the problems.

1. At a carnival, Diana sees a balloon shooter game. The ticket cost is \$3. The rule is that the first person to shoot 10 balloons from a total 30 balloons wins \$10. What is the expected payoff for the winner?

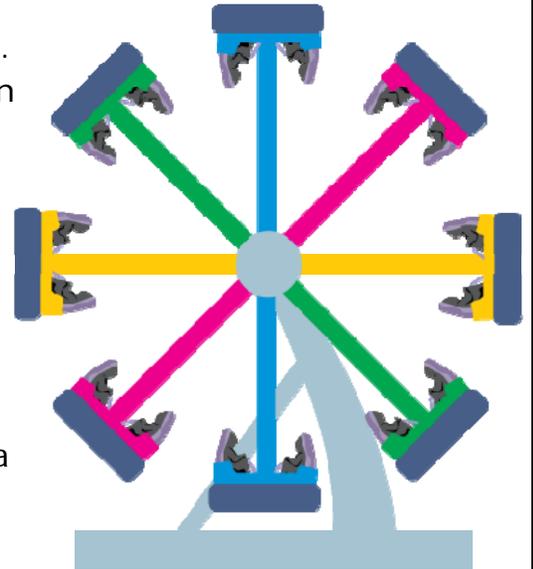
2. In a school, 10% of students have 7 ball pens, 30% of students have 3 ball pens, 40% of students have 2 ball pens and 20% of students have 1 ball pens. What is the expected number of ball pens of a student?

3. In a party, the guest's attendance depends on their vehicle status. If they have four wheelers then the attendance of guests is 2500 and if they have two wheelers then the attendance of guests is 1500. If on the next party, 70% of families will have four wheelers and 30% of families will have two wheelers. What is the expected attendance of guests?

4. Rachel sells a piece of land. She spends \$1,500 to advertise the sale. If the plot sells in 5 months, she earns \$5000. Otherwise, she loses the listing. If there is a 60% chance that the plot will sell in 5 months, what is the expected payoff?

5. In a survey report of offices, 60% of offices have 10 air conditioners, 10% of offices have 3 air conditioners, and 30% of offices have 6 air conditioners. What is the expected number of air conditioners in offices?

6. At a fair, the people who light 15 candles from total 20 in a minute wins \$3. To play this game he or she pays \$ 2. What is the expected payoff for the winner?



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7. At a movie theater, the attendance of fans depends on that how many people like the actor. If they like the actor then the gathering is 1,000. If they do not like the actor then the gathering is 300. If for the next movie show, 80% of people will like the actor and 20% of people do not like the actor. What is the expected gathering size?

8. Phoebe sells a gown. She spends \$1,500 to advertise the sale. If the gown sells in 1 month, she earns \$20,000. Otherwise, she loses the listing. If there is a 40% chance that the gown will sell in 1 month, what is the expected payoff for the winner?

9. At a carnival, Joseph sees a ring throwing game. The ticket cost for this game is \$2. The rule is that the person who rings the 5 things from total 15 things wins \$8. What is the expected payoff?

10. In a city 50% of families have 5 laptops, 20% of families have 4 laptops, 10% of families have 2 laptops and 20% of families have 3 laptops. What is the expected number of laptops per family?

