Theoretical and experimental probability worksheet – Grade 9

Grade 9 · Mixed level · 20 questions · **Version X2455**

Name: _____ Date: _____ Score: ___ / 20

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1. It rained on 10 of the last 30 days. What is the experimental probability of rain? Write it in lowest terms.

   Answer: _____

2. A jar has 9 red, 12 blue and 8 green candies. What is the probability of red? Write it in lowest terms.

   Answer: _____

3. A raffle sells 200 tickets and Chloe buys 1. What is the probability that Chloe wins? Write it in lowest terms.

   Answer: _____

4. A store found 28 faulty phones in 400. What percent is that?

   Answer: _____

5. It rained on 3 of the last 20 days. What is the experimental probability of rain? Write it in lowest terms.

   Answer: _____

6. A store found 4 faulty phones in 100. What percent is that?

   Answer: _____

7. A raffle sells 100 tickets and Jayden buys 5. What is the probability that Jayden wins? Write it in lowest terms.

   Answer: _____

8. A weather app says a 30% chance of rain. On about how many of 50 such days should it rain?

   Answer: _____

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9. A jar has 9 red, 10 blue and 5 green candies. What is the probability of not green? Write it in lowest terms.

   Answer: _____

10. A store found 32 faulty phones in 500. About how many of 25000 would be faulty?

    Answer: _____

11. It rained on 6 of the last 20 days. About how many rainy days would you predict in 60 days?

    Answer: _____

12. A store found 8 faulty phones in 200. About how many of 10000 would be faulty?

    Answer: _____

13. It rained on 13 of the last 20 days. About how many rainy days would you predict in 60 days?

    Answer: _____

14. A jar has 4 red, 3 blue and 5 green candies. What is the probability of not green? Write it in lowest terms.

    Answer: _____

15. An insurer pays 10000 dollars with probability 2%. What is the expected payout per customer, in dollars?

    Answer: $_____

16. Maya buys 4 of 100 tickets at 20 dollars each, for a 200 dollar prize. What is the expected gain, in dollars? Use a minus sign for a loss.

    Answer: _____

17. An insurer charges 100 dollars and pays 10000 dollars with probability 5%. What is its expected profit per customer, in dollars? Use a minus sign for a loss.

    Answer: _____

18. An insurer pays 10000 dollars with probability 5%. What is the expected payout per customer, in dollars?

    Answer: $_____

19. An insurer charges 200 dollars and pays 10000 dollars with probability 5%. What is its expected profit per customer, in dollars? Use a minus sign for a loss.

    Answer: _____

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20. Mateo buys 5 of 1000 tickets at 20 dollars each, for a 400 dollar prize. What is the expected value of the prize, in dollars?

    Answer: $_____

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Answer key · Version X2455

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1. **1/3**
2. **9/29**
3. **1/200**
4. **7%**
5. **3/20**
6. **4%**
7. **1/20**
8. **15**
9. **19/24**
10. **1600**
11. **18**
12. **400**
13. **39**
14. **7/12**
15. **200**
16. **-72**
17. **-400**
18. **500**
19. **-300**
20. **2**

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