

Chapter 1 Test

For #1 to #6, select the best answer.

1. The minimum allowable height of a step is 125 mm. The maximum height is 200 mm. What is an expression for the tolerance of a step height?
A 150 mm \pm 50 mm
B 175 mm \pm 25 mm
C 155.5 mm \pm 44.5 mm
D 162.5 mm \pm 37.5 mm
2. What are the odds of correctly guessing the answers to two multiple choice questions when there are four options?
A 1:3 **B** 1:9
C 1:15 **D** 1:16
3. What is the probability of drawing a spade from a deck of 52 cards?
A 60% **B** $\frac{1}{4}$
C 50:50 **D** 4.0
4. A coin is tossed five times. The results are one head followed by four tails. What is the probability that the next toss will be heads?
A $\frac{1}{2}$ **B** $\frac{3}{4}$
C 80% **D** 90%
5. What is the probability of three coin tosses resulting in three tails?
A 50-50 **B** 1:8
C $\frac{1}{6}$ **D** $\frac{1}{9}$
6. A weather forecaster predicts that Saturday will have a 60% chance of rain. Which statement is true based on the forecaster's prediction?
A It will rain for 60% of the day on Saturday.
B Saturday will probably have sunny periods.
C The rain on Saturday will be light.
D There is a 3 out of 5 chance of rain on Saturday.
7. Is 214 000 L an allowable volume for a 216 000-L pool with a tolerance of ± 1200 L?
8. Determine the probability of each outcome.
a) rolling a total of 3 with two different dice. Express your answer as a fraction.
b) drawing a face card from a standard deck of cards. Express your answer as a percent.
c) Getting heads and a heart when flipping a coin and choosing a card from a standard deck. Express your answer as a fraction.
9. Rick and Emily are discussing the statement "The more you toss heads in a row, the more likely you will toss a tails next." Rick says it is common sense and Emily says it is not mathematical thinking. Do you agree with Rick, Emily, or neither? Explain your thinking.



Name: _____

Date: _____

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(continued)

- 10.** Lucy manages a produce store. When ordering apples, she expects that 15% of the apples will arrive spoiled.
- a)** If she orders 350 kg of apples, how many kilograms would she expect to arrive spoiled?
 - b)** On one order, 30 kg of the apples arrived spoiled. How many kilograms would you expect Lucy ordered?
- 11.** A three-colour spinner is spun, followed by a toss of a coin, followed by drawing a card from a regular deck of cards. What is the chance that you will correctly predict all three possible outcomes? Express your answer as a fraction.

