

Name: \_\_\_\_\_

Period: \_\_\_\_\_

### Checkpoint 8B

### Integrated Math 2

---

*Include all necessary math work or explanations for each question.*

---

- 1) Given that A and B are independent events, what is  $P(A \text{ and } B)$  if  $P(A) = \frac{1}{2}$  and  $P(B) = \frac{2}{7}$ ?
- 2) Given that A and B are mutually exclusive events, what is  $P(A \text{ or } B)$  if  $P(A) = 32\%$  and  $P(B) = 17\%$ ?
- 3) What is the probability of rolling a 4 on a fair number cube and getting “tails” when tossing a coin?
- 4) At a local high school, 34% of the students take a bus to school and 56% of the students walk to school. What is the probability of randomly selecting a student that takes a bus or walks to school?
- 5) A survey revealed that 28% of people are entertained by reading books, 37% are entertained by watching movies, and 18% are entertained by both books and movies. What is the probability that a person will be entertained by books or movies?
- 6) Given a standard deck of 52 cards, what is the probability of choosing a card that is a heart or a king?
- 7) A spinner has 8 equal sections 1 to 8. It's spun once and lands on a number. Find the following probabilities:
  - a. multiple of 4 or less than 3?
  - b. even or greater than 4?
- 8) A bag contains 4 black marbles, 3 white marbles, and 6 tan marbles. Answer the following questions:
  - a. If you choose a marble, put it back, and then choose another marble, what is the probability that the first marble will be black and the second will be tan?
  - b. If you choose a marble, then another marble *without putting the first one back in the bag*, what is the probability that the first marble will be black and the second will be tan?

**Use the following information to answer questions 9 and 10.**

Mr. Gamboa was shooting free throws in the gym. He shot four free throws a total of 12 times. Using the sample space of possible outcomes listed below, answer each of the following questions. Y=Made, N=Missed.

YYYN	YNYN	YYYY	NNNY
NNNY	NNNN	YYYY	NNNY
NYYY	NNYN	YYYN	NYYN

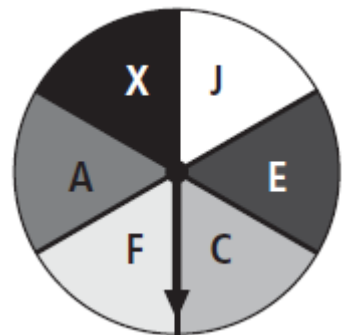
9) Determine the probability he made the 2<sup>nd</sup> shot.

10) Determine the probability that he missed the 1<sup>st</sup> shot and the 3<sup>rd</sup> shot.

**Use the spinner to answer questions 11 through 14.**

11) What is the probability of the arrow stopping on a consonant or one of the first 4 letters of the alphabet?

12) What is the probability of the arrow stopping on “X” on the first spin and “F” on the second spin?



13) What is the probability of the arrow stopping on “J” or “A” on one spin?

14) What is the probability of the arrow stopping on “J” and “A” on one spin? Explain.