Test, Form 3B

Write the correct answer in the blank at the right of each question.

1. Derek's family is planning a trip to Asia. If they want to visit each of the cities listed in the table at the right, in how many different orders can they do so?

City
Beijing
Shanghai
Taipei
Tokyo

1. __24 ways__

2. Employees at a company are given a five-digit employee identification code. If each digit cannot be repeated, how many different codes are possible?

2. ~~30, 240 codes~~

3. There are 23 students in Mrs. Sinclair's Spanish class. Mrs. Sinclair will randomly select one student as president and a second student as vice-president. In how many different ways can they be chosen?

3. __506 ways__

4. Adrian spun a spinner with 5 equal sections 85 times. Each section of the spinner was a different color. One of the colors was blue. The outcome of "blue" occurred 20 times. Compare the theoretical to the experimental probability of spinning blue.

4. __20/85__

5. The table at the right shows the voting preferences for registered voters. Describe a model that you could use to simulate the selection of a candidate.

Candidate	Percent of Voters
Alvarez	20
Jones	40
Mulroney	25
Undecided	15

5. __A person could be used to count the votes and who ever has the most votes wins.__

Exercises 6 and 7, find the total number of outcomes that will be in each sample space.

6. buying bedroom furniture if you can select one each from 8 dressers, 3 beds, 7 lamps, and 4 night tables

6. __672__

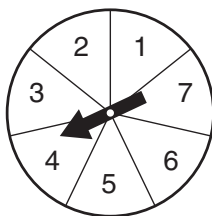7. tossing a dime, a quarter, a penny, and rolling a number cube

7. __45__

8. How many ways can 5 friends sit together at the movies in 5 seats?

8. __120 ways__

Test, Form 3B   *(continued)*

Use the spinner to find each probability.

9. *P*(odd number)

9. ___4/1_____

10. *P*(*not* 3)

10. ___6/7_____

11. *P*(4 or 5)

11. ___2/7_____

12. The spinner is spun twice. Find *P*(1, then 6).

12. ___1/49_____

A bag contains 4 white beads, 6 red beads, 5 yellow beads, and 5 blue beads. One bead is selected, kept, and another bead is selected.

13. Find *P*(red, then red).

13. ___3/38_____

14. Find *P*(blue, then yellow).

14. ___5/76_____

15. Farah rolled a number cube 84 times. The outcome of "2" occurred 12 times. Compare the theoretical to the experimental probability of rolling 2.

15. ___2/84_____

Find each value.

16. *P*(4, 4)

16. ___24_____

17. *P*(6, 3)

17. ___120_____

18. *P*(9, 5)

18. ___32_____

19. A bowl contains 8 pennies, 7 nickels, and 10 dimes. Elyse removes one coin at random from the bowl and does not replace it. She then removes a second coin at random. What is the probability that both will be nickels?

19. ___7%_____

20. There are 26 prize tickets in a bowl, labeled A to Z. What is the probability that a prize ticket with a vowel will be chosen, not replaced, and then another prize ticket with a vowel will be chosen? Does this represent an independent or dependent event? Explain.

20. __independent__