Unit 7 Review

- $mean = \frac{sum\ of\ the\ numbers}{number\ of\ data}$
- mode = most often
- median= number in the middle of the data, after it has been organized from smallest to largest
- range= largest – smallest

- $probability = \frac{number\ of\ favourable\ outcomes}{all\ outcomes}$
- Fraction → Percent
    - $numerator \div denominator \times 100$

1. Find the mean and mode of this set of data: 105, 118, 126, 94, 117, 105, 105

2. The waiting times, in minutes, at a fast-food restaurant were:
   8, 6, 0, 0, 7, 4, 0, 3, 2, 5
   Find the mean and mode of the data.

3. Hamid's final exam marks are: 65, 75, 85, 70, 80, 90, 60, 67
   Calculate his average mark.

4. Find the median and the range for this set of data: 66, 75, 78, 59, 63, 74, 69, 74

5. In a series of trials for the 400-m race, an athlete's times, in seconds, were:
   129, 128, 127, 125, 120, 125, 126, 122
   Find the mean and median times.

6. Oliver's overtime earnings, in dollars, for the last 6 weeks were: 75, 95, 65, 105, 85, 95
   Find the median and the mode.

7. Find the mean, median, and range of this set of data: 80, 71, 66, 77, 82, 74

8. In the last 6 basketball seasons, Roon scored these points: 134, 111, 130, 140, 119, 122
   Find the mean, median, and range of the scores.

9. Here is a set of data: 24, 22, 19, 24, 7, 26, 39, 22, 24
   Calculate the mean without the outliers.

10. Jessie records the time she spends travelling to work by bus each day for 12 days.
    Here are the times, in minutes:
    19, 23, 34, 20, 23, 22, 33, 22, 22, 24, 25, 24
    a) Calculate the mean.

    b) Identify the outliers.

    c) Calculate the mean without the outliers.

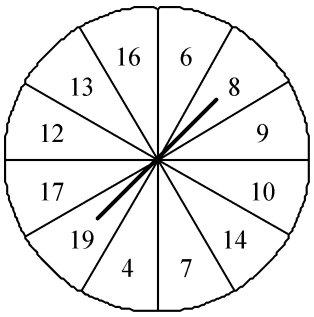
11. The numbers of students who watched the soccer games on TV for 5 nights were:
    45, 50, 55, 60, 70
    a) What was the average number of student viewers each night?

    b) How would the average change if 30 more students watched on the 5th night?

12. A bag contains 7 blue, 5 yellow, 8 red, 4 green, and 6 purple marbles. A marble is picked at random. Find the probability that it is either green or purple.

13. The health and safety committee sold 165 tickets for a prize draw. Justin bought 33 tickets. What is his percent chance of winning?

14. The pointer of this spinner is spun once. What is the probability that it will land on an even number?



15. Ten cards are lettered from A to J. A card is picked without looking.
    a) What is the probability of picking a vowel?

    b) What is the probability of picking X, Y, or Z?

    c) Express each probability as a percent.

16. At a pizza parlor, choices for the topping are ham, pineapple, and pepperoni. The available sizes are small and large.
    a) Draw a tree diagram to list the possible 1-topping pizzas.

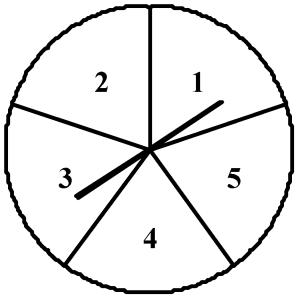
    b) Find the probability of choosing at random a large pineapple pizza.

17. A spinner is divided into 4 equal sectors of red, green, blue, and purple. A die labelled 1 to 6 is rolled and the pointer of the spinner is spun. What is the probability of the pointer landing on red and getting an even number on the die?

18. Lewis has a pair of blue shorts and a pair of green shorts. He also has a yellow T-shirt, a red T-shirt, and a white T-shirt.
    a) Draw a tree diagram to show all possible combinations of shorts and T-shirt Lewis can wear.

    b) Lewis picks a pair of shorts and a T-shirts without looking. What is the probability that he picks a yellow or red T-shirt and a pair of blue shorts?

19. This spinner has 5 equal sectors. The pointer on the spinner is spun once.



    a) What is the probability of getting a 5?

    b) Is the pointer more likely to land on an even number than on an odd number? Explain.