

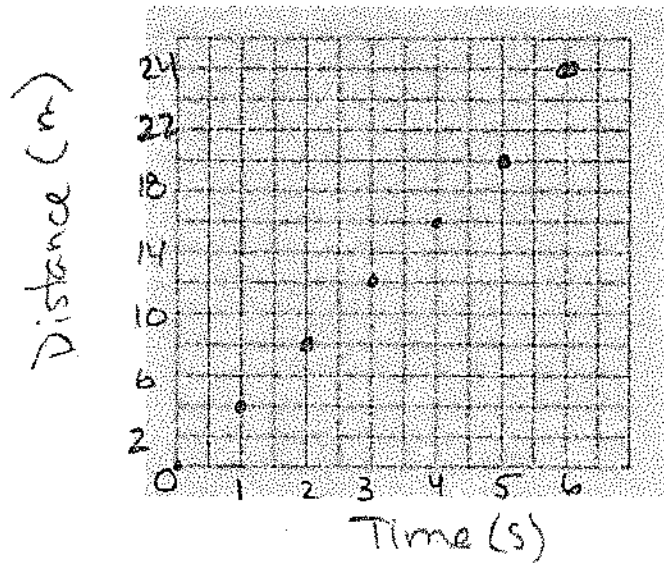
Answer Key

Statistics and Probability (Data Analysis) Review Booklet 3

1. Create, label and interpret line graphs to draw conclusions.
 - Determine the common attributes (title, axes and intervals) of line graphs by comparing a given set of line graphs.
 - Determine whether a given set of data can be represented by a line graph (continuous data) or a series of points (discrete data), and explain why.
 - Create a line graph from a given table of values or a given set of data.
 - Interpret a given line graph to draw conclusions.

Consider the following data:

Time (s)	Distance (m)
0	0
1	4
2	8
3	12
4	16
5	20
6	24

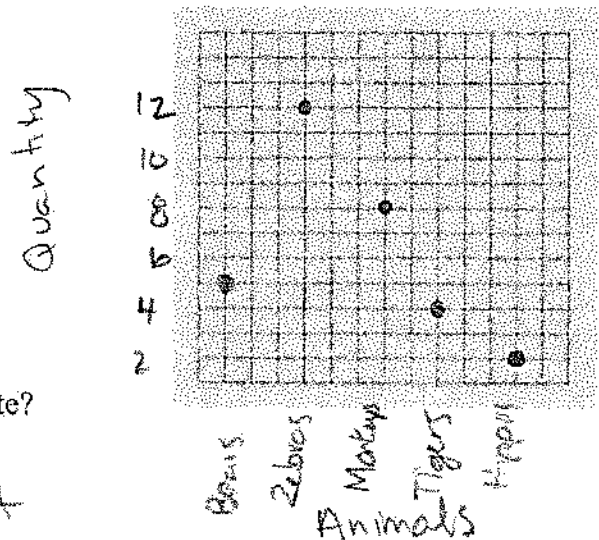


- a. Construct an appropriate graph for the data above (use the appropriate graphing conventions)
- b. Is the data continuous or discrete? Explain.

Continuous bc there would be data in between points

Consider the following data:

Animals	quantity
bears	5
Zebras	12
monkeys	8
tigers	4
hippos	2



- a. Construct an appropriate graph for the data above
- b. Is the data continuous or discrete? Explain.

Discrete - can not have half of an animal

2. Select, justify and use appropriate methods of collecting data, including:
- questionnaires
 - experiments
 - databases
 - electronic media.
 - Select a method for collecting data to answer a given question, and justify the choice.
 - Design and administer a questionnaire for collecting data to answer a given question, and record the results.
 - Answer a given question by performing an experiment, recording the results and drawing a conclusion.
 - Explain when it is appropriate to use a database as a source of data.
 - Gather data for a given question by using electronic media, including selecting data from databases.

Dexter wants to know what the favorite sport is for students in grade 6.

- a. What is a fair question for this survey?

What is your favorite sport?

- b. What is an example of a biased question?

-anything that might be persuasive
ex basketball is very popular what is your sport?

- c. Who would you ask this question for this survey?

Grade 6 students

- d. Describe one way that you could display the results of this survey.

Bar graph

3. Graph collected data, and analyze the graph to solve problems.
- Determine an appropriate type of graph for displaying a set of collected data, and justify the choice of graph.
 - Solve a given problem by graphing data and interpreting the resulting graph.

Statistics and Probability (Chance and Uncertainty)

4. Demonstrate an understanding of probability by:

- identifying all possible outcomes of a probability experiment
- differentiating between experimental and theoretical probability
- determining the theoretical probability of outcomes in a probability experiment
- determining the experimental probability of outcomes in a probability experiment
- comparing experimental results with the theoretical probability for an experiment.
- List the possible outcomes of a probability experiment, such as:
 - tossing a coin
 - rolling a die with a given number of sides
 - spinning a spinner with a given number of sectors.
- Determine the theoretical probability of an outcome occurring for a given probability experiment.
- Predict the probability of a given outcome occurring for a given probability experiment by using theoretical probability.
- Conduct a probability experiment, with or without technology, and compare the experimental results with the theoretical probability.
- Explain that as the number of trials in a probability experiment increases, the experimental probability approaches theoretical probability of a particular outcome.
- Distinguish between theoretical probability and experimental probability, and explain the differences.

Dexter is rolling a six sided dice what is the theoretical probability of rolling:

a. $P(5)$?

$$\frac{1}{6}$$

b. $P(\text{even})$?

$$\frac{3}{6}$$

c. $P(\text{not a } 2)$?

$$\frac{5}{6}$$

Consider the spinner below, what is the theoretical probability of:

a. $P(\text{yellow})$

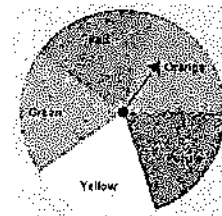
$$\frac{1}{5}$$

b. $P(\text{green or blue})$

$$\frac{2}{5}$$

c. $P(\text{not red})$

$$\frac{4}{5}$$



Dexter tosses 2 coins 50 times and Dexter gets the following outcomes:

Coins	frequency
HH	14
HT	25
TT	11

What is the experimental probability of landing:

a. $P(\text{HH})$ $\frac{14}{50}$

b. $P(\text{at least one H})$ $\frac{39}{50}$

Consider the following spinner, based on this spinner what is the probability of spinning:

a. $P(\text{red})$ $\frac{1}{8}$

b. $P(\text{blue})$ $\frac{2}{8}$

c. $P(\text{yellow})$ $\frac{4}{8} = \frac{1}{2}$

d. $P(\text{not red})$ $\frac{7}{8}$

e. To win you must land on red, is this a fair game? Explain.

No, Red only has a $\frac{1}{8}$ chance

