

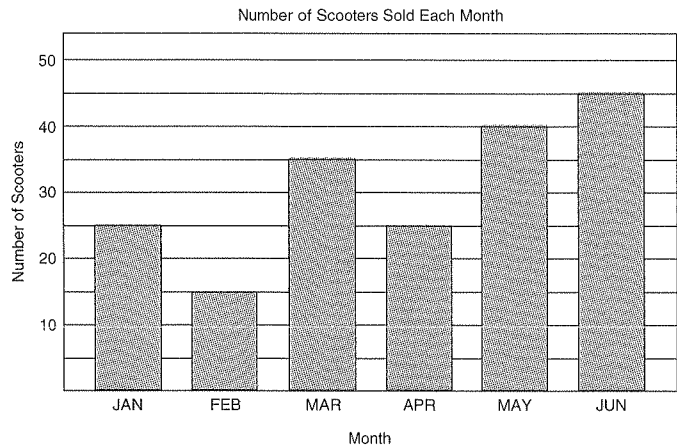
Lesson 1 Bar Graphs

The **bar graph** shows the number of scooters that were sold at a particular store from January to June of one year.

How many scooters were sold in April?

Locate the top edge of the bar that represents April. Follow this to the left to locate its value on the vertical axis.

In April, 25 scooters were sold.



Use the bar graph to answer each question.

- How many scooters were sold in January? _____
- How many scooters were sold in March? _____
- How many scooters were sold in June? _____
- In which two months were the same number of scooters sold?

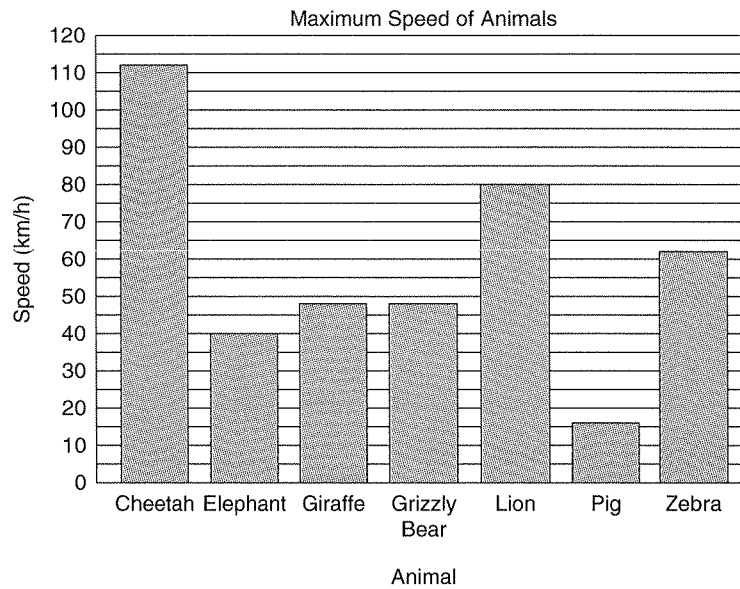
- How many more scooters were sold in May than in April? _____
- How many fewer scooters were sold in February than in January? _____
- What is the minimum number of scooters that need to be sold in July to have more sales than in June? _____
- During which two consecutive months did the sales increase the most?

- During which two consecutive months did the sales decrease the most?

- The sales goal for July through December is to sell more scooters than were sold in January through June. What is the minimum number of scooters that need to be sold in July through December to meet the sales goal? _____

Lesson 1 Problem Solving

Use the bar graph to answer each question.



1. What is the maximum speed of a cheetah? _____
2. What is the maximum speed of a giraffe? _____
3. What is the maximum speed of a grizzly bear? _____
4. What is the maximum speed of a pig? _____
5. What is the maximum speed of a zebra? _____
6. How much faster is a lion than an elephant? _____
7. How much slower is a pig than a grizzly bear? _____
8. How much faster is a cheetah than a zebra? _____
9. Which animal(s) is(are) 8 km/h faster than an elephant? _____
10. If an elephant, giraffe, and zebra were racing, which animal would most likely win? _____

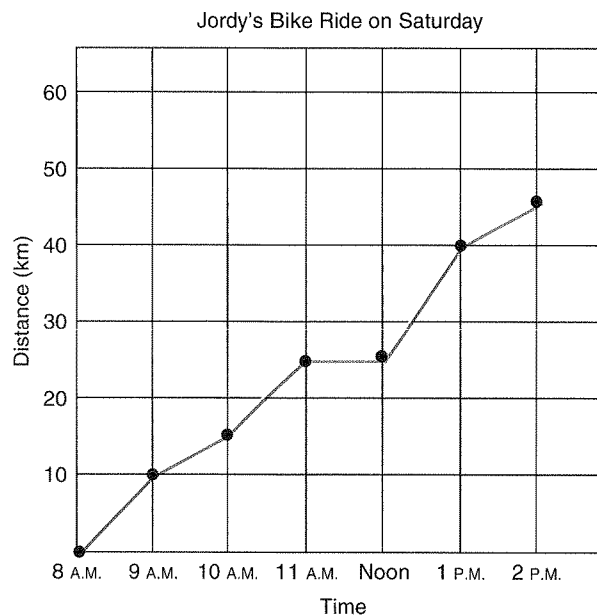
Lesson 2 Line Graphs

The **line graph** shows the distance Jordy rode on his bike ride on Saturday.

How many kilometres did Jordy ride by 10:00 A.M.?

Locate the point on the graph that represents 10:00 A.M. Follow this to the left to locate its value on the vertical axis.

By 10:00 A.M., Jordy rode
15 km.

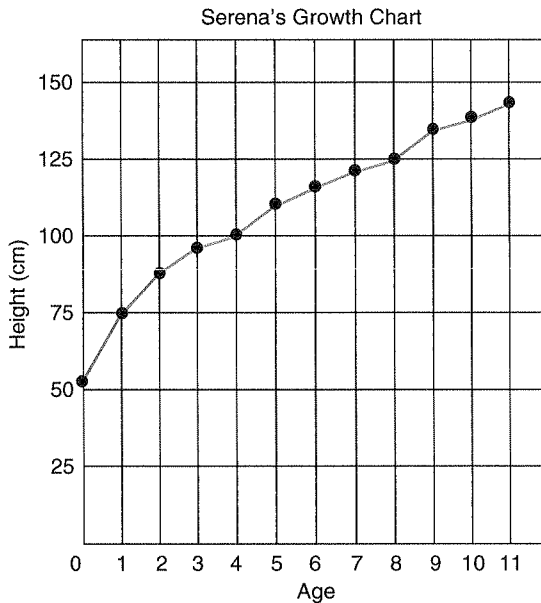


Use the line graph of Jordy's bike ride to answer each question.

- How many kilometres did Jordy ride by 8:00 A.M.? _____
- How many kilometres did Jordy ride by 11:00 A.M.? _____
- How many kilometres did Jordy ride by noon? _____
- How many kilometres did Jordy ride by 2:00 P.M.? _____
- Between which two consecutive times graphed did Jordy ride the farthest distance? _____
- Between which two consecutive times graphed did Jordy ride the shortest distance? _____
- About how many kilometres did Jordy ride by 10:30 A.M.? _____
- How many more kilometres did Jordy bike between noon and 1:00 P.M. than he biked between 1:00 P.M. and 2:00 P.M.? _____
- About what time do you think Jordy stopped to eat lunch? _____
- On Sunday, Jordy biked one-third as far as he did on Saturday. How many kilometres did Jordy bike on Sunday? _____

Lesson 2 Problem Solving

Use the line graph to answer each question.



What was Serena's approximate height at the following ages?

1. 0/birth _____ age 2 _____ age 5 _____

2. age 6 _____ age 8 _____ age 11 _____

3. What is the difference in Serena's height at age 4 and her height at age 1? _____

4. What is the difference in Serena's height at age 10 and her height at age 4? _____

5. Between which two consecutive ages did Serena grow the most?

6. Between which two consecutive ages did Serena grow 12.5 cm?

7. If Serena grows 8 cm more by the time she is 12 years old, how tall will she be? _____

8. When Serena was 8 years old she was 40 cm shorter than her mom. How tall is Serena's mom? _____

Lesson 3 Mean

To find the **mean** or average of a set of numbers, add up all the numbers and then divide by the number of addends.

What is the mean of 6, 10, 11, 9?

Add the values.

$$\begin{array}{r} 1 \\ 6 \\ 10 \\ 11 \\ \hline +9 \\ \hline 36 \end{array}$$

Divide by 4, the number of addends.

$$\begin{array}{r} 9 \\ 4 \overline{)36} \\ \underline{36} \\ 0 \end{array}$$

The mean of 6, 10, 11, 9 is 9.

Find the mean of each set of numbers.

a

b

1. 6, 9, 5, 8 _____

13, 21, 10, 16 _____

2. 12, 17, 19, 11, 16 _____

26, 22, 27, 30, 25 _____

3. 42 cm, 35 cm, 33 cm, 41 cm, 39 cm _____

88%, 97%, 92%, 95% _____

4. \$2.48, \$2.67, \$2.28, \$2.45 _____

\$1.25, \$1.64, \$1.38, \$1.29 _____

Lesson 3 Problem Solving

Solve each problem.

1. Betsy bought four books at the bookstore. The prices of the books were \$4, \$5, \$8, and \$3. What is the mean price of the books? **1.**

The mean price of the books is _____.

2. Keshawn kept track of how long it took him to drive to work every day this week. On Monday, it took 18 min. On Tuesday, it took 22 min. On Wednesday, it took 18 min. On Thursday, it took 21 min. On Friday, it took 26 min. What is the mean amount of time it took Keshawn to drive to work this week? **2.**

The mean amount of time it took Keshawn to drive to work this week is _____ min.

3. On the first three math tests this term, Yoshiyo scored 87%, 95%, and 91%. What is the mean score of Yoshiyo's first three math tests? **3.**

The mean score of Yoshiyo's first three math tests is _____.

4. Ryan and four of his friends measured their heights in centimetres. Their heights were 143 cm, 153 cm, 145 cm, 143 cm, and 155 cm. What is the mean height of Ryan and his friends? **4.**

The mean height of Ryan and his friends is _____ cm.

5. Hussein bought his lunch three days this week at school. He spent \$2.50 on Monday, \$3.25 on Tuesday, and \$2.80 on Thursday. What is the mean amount of money that Hussein spent on lunch this week? **5.**

The mean amount of money that Hussein spent on lunch this week is _____.

Lesson 4 Median, Mode, and Range

The **median** is the middle number of a set of numbers.

The **mode** is the number that appears most often in the set of numbers.

The **range** is the difference between the greatest and least number in the set.

What are the median, mode, and range of 9, 14, 11, 7, 9?

Order the numbers from least to greatest to find the median.

7, 9, 9, 11, 14

The median is 9.

The number 9 appears most often. The mode is 9.

Subtract 7 (least) from 14 (greatest) to find the range.

$14 - 7 = 7$

The range is 7.

Find the median, mode, and range of each set of numbers.

a

b

1. 5, 9, 5, 10, 6 median: _____
mode: _____
range: _____

9, 3, 6, 4, 8, 3, 8, 4, 3
median: _____
mode: _____
range: _____

2. 15, 17, 11, 13, 15, 10, 14
median: _____
mode: _____
range: _____

33, 37, 30, 29, 34, 37, 39
median: _____
mode: _____
range: _____

3. 87%, 80%, 76%, 84%, 80%
median: _____
mode: _____
range: _____

67%, 78%, 85%, 77%, 77%, 73%, 89%
median: _____
mode: _____
range: _____

4. \$127, \$105, \$113, \$120, \$127
median: _____
mode: _____
range: _____

\$58, \$65, \$44, \$63, \$44, \$65, \$44
median: _____
mode: _____
range: _____

Lesson 4 Problem Solving

Answer each question.

1. Shanelle ran five times this week. On Monday, she ran 3 km. On Wednesday, she ran 5 km. On Thursday, she ran 3 km. On Friday, she ran 4 km. On Saturday, she ran 6 km.

What is the median of the number of kilometres Shanelle ran this week? _____

What is the mode of the number of kilometres Shanelle ran this week? _____

What is the range of the number of kilometres Shanelle ran this week? _____

2. David kept track of the amounts of his phone bills over the past 5 months. The amounts of the phone bills were \$22, \$16, \$34, \$28, and \$16.

What is the median amount of the phone bills?

What is the mode amount of the phone bills?

What is the range of the phone bills? _____

3. Enrique had nine math tests all school year. His scores were 78%, 87%, 70%, 76%, 88%, 92%, 73%, 88%, and 90%.

What is the median score of Enrique's math tests?

What is the mode score of Enrique's math tests?

What is the range of the scores of Enrique's math tests? _____

4. An electronics store carries five different plasma televisions. The prices of these televisions are \$325, \$395, \$405, \$485, and \$325.

What is the median price of televisions at the electronics store? _____

What is the mode price of televisions at the electronics store? _____

What is the range of the television prices at the electronics store? _____

1.

2.

3.

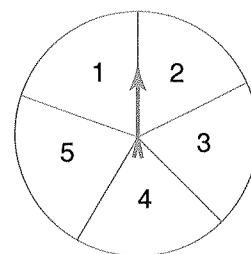
4.

Lesson 5 Probabilities

Probability is the chance that something will occur.

What is the probability of spinning a 3?

Spinning a 3 is the favourable outcome. There are 5 possible outcomes.



$$\frac{\text{number of favourable outcomes}}{\text{number of possible outcomes}} \longrightarrow \frac{1}{5}$$

The probability of spinning a 3 is $\frac{1}{5}$.

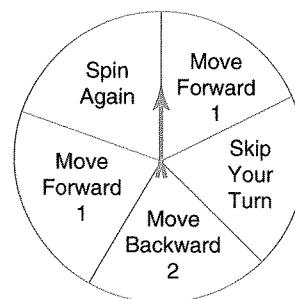
You spin the spinner shown at the right. Find the probability of the spinner stopping on

1. Skip Your Turn _____

2. Move Forward 1 _____

3. Move Backward 2 _____

4. Spin Again _____



A bag contains 11 marbles. Five marbles are yellow. Three marbles are red. Two marbles are green. One marble is blue. What is the probability of selecting a marble of the given colour without looking?

a

b

5. red _____

yellow _____

6. blue _____

green _____

7. yellow or blue _____

red or green _____

Lesson 5 Problem Solving

Find each probability.

1. Brittany and Jessica are playing a game in which they roll a number cube each turn. The sides of the number cube are labelled 1–6. On Jessica’s turn she is hoping to roll a 2. What is the probability that Jessica will roll a 2? **1.**

The probability is _____.

2. Damian has one \$20 bill, three \$10 bills, and six \$5 bills in his wallet. If he selects one bill from his wallet without looking, what is the probability that he will select a \$10 bill? **2.**

The probability is _____.

3. Luis wrote each of the letters of the alphabet on a separate card. He placed all of these cards face down on the floor. If he selects one card, what is the probability that he will select the card with the letter T? **3.**

The probability is _____.

4. Margaret has eight index cards. She writes one letter on each card. When she places the cards side-by-side, they spell her first name. She mixes up the cards and places them face down on her desk. If she selects one of the cards, what is the probability that it will have the letter R or T on it? **4.**

The probability is _____.

5. The Whitman family just bought a new dog. They were trying to think of a name for the dog. Their ideas were Fluffy, Baxter, Patch, Babe, and Bailey. They wrote all their ideas on separate pieces of paper and placed them in a bowl. Without looking, they selected the name from the bowl. What is the probability that the name they selected was Patch? **5.**

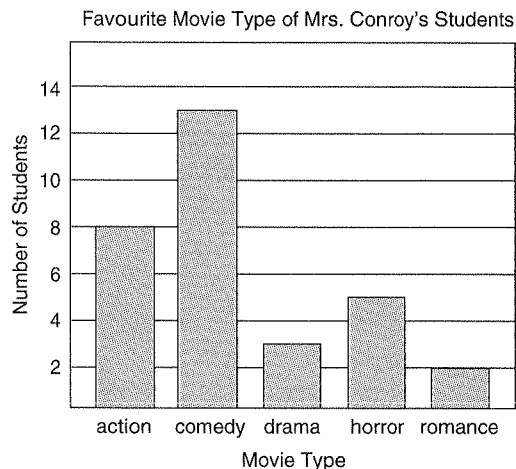
The probability is _____.

CHAPTER 7 PRACTICE TEST

Graphs and Averages

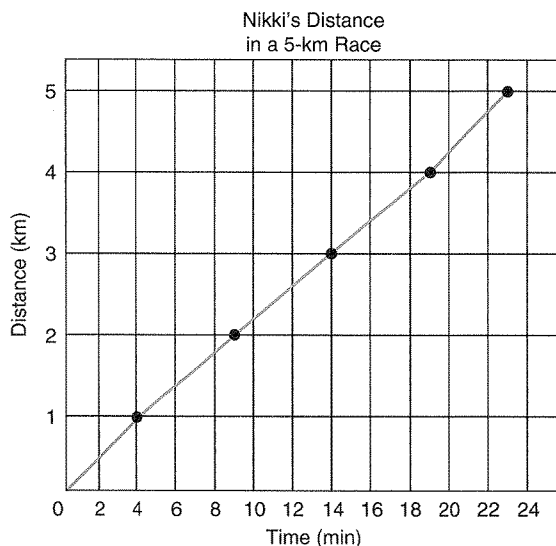
Use the bar graph to answer each question.

- How many students chose comedy as their favourite movie type? _____
- How many students chose action as their favourite movie type? _____
- How many more students chose horror as their favourite movie type than romance? _____



Use the line graph to answer each question.

- How long did it take Nikki to run the first kilometre? _____
- After 14 min, how far did Nikki run? _____
- How long did it take Nikki to run 4 km? _____
- What is the quickest amount of time Nikki ran a kilometre in the race? _____



Find the mean, median, mode, and range of each set of numbers.

a

8. 78%, 84%, 87%, 95%, 83%, 77%, 84%

mean: _____
 median: _____
 mode: _____
 range: _____

b

- \$125, \$164, \$118, \$114, \$164

mean: _____
 median: _____
 mode: _____
 range: _____


9. A bag contains eight marbles. Four marbles are black. Three marbles are white. One marble is red. What is the probability of selecting a white marble without looking? _____

CHAPTER 8 PRETEST

Metric Measurement

Find the length of each line segment to the nearest centimetre (cm).
Then find the length of each line segment to the nearest millimetre (mm).

*a**b*

1. _____ cm _____ mm 

2. _____ cm _____ mm 

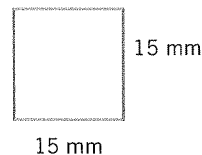
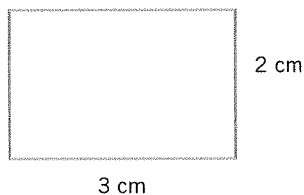
Find the perimeter and the area of each rectangle.

3. *perimeter:* _____ cm

4. *perimeter:* _____ mm

area: _____ cm²

area: _____ mm²



Complete the following.

*a**b*

5. 7 cm = _____ mm

28 m = _____ cm

6. 9 m = _____ cm

49 m = _____ mm

7. 8 km = _____ m

16 L = _____ mL

8. 5 kL = _____ L

5 kg = _____ g

9. 2 g = _____ mg

14 cm = _____ mm

10. 40 L = _____ mL

42 m = _____ cm

11. 3 kL = _____ L

35 m = _____ mm

12. 60 kg = _____ g

34 km = _____ m