

LESSON
6-2 Practice B
Range, Mean, Median, and Mode

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

1.

School Sit-Up Records (sit-ups per minute)	31	28	30	31	30
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2.

Brian's Math Test Scores	86	90	93	85	79	92
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3.

Heights of Basketball Players (in.)	72	75	78	72	73
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4.

Team Heart Rates (beats per min)	70	68	70	72	68	66
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5.

Daily Winter Temperatures (°F)	45	50	47	52	53	45	51
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6.

Daily Theater Ticket Sales	68	74	71	69	74	78	70
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7. Anita has two sisters and three brothers. The mean of all their ages is 6 years. What will their mean age be 10 years from now? Twenty years from now?

8. In a class of 28 sixth graders, all but one of the students are 12 years old. Which two data measurements are the same for the student's ages? What are those measurements?

LESSON **Puzzles, Twisters & Teasers**

6-1 Making the Grade

Charlie, Pat, Oliver, Eduardo, and Hannah each received different grades from B all the way up to an A+ on the last test. Given the following clues, use the yes/no table to determine the grade each of the students received.

- Oliver received some sort of A.
- Hannah and Pat each got a higher grade than Eduardo.
- Charlie got the A-.
- Pat's grade was higher than Oliver's was.

	A+	A	A-	B+	B
Hannah					NO(#2)
Eduardo	NO(#2)				
Oliver	NO(#4)		NO	NO	NO
Pat					NO(#2)
Charlie			YES(#3)		

To solve the riddle, fill the spaces above each of the grades with the first letter of the name of the person who received that grade.

Implies:

	A+(P)	A(O)	A-(C)	B+(H)	B(E)
Hannah	NO	NO	NO	YES	NO(#2)
Eduardo	NO(#2)	NO	NO	NO	YES
Oliver	NO(#4)	YES	NO(#1)	NO(#1)	NO(#1)
Pat	YES	NO	NO	NO	NO(#2)
Charlie	NO	NO	YES(#3)	NO	NO

What do you get when you cross a dog and a hen?

$\frac{P}{A+} \frac{O}{A} \frac{O}{A} \frac{C}{A-} \frac{H}{B+} \frac{E}{B} \frac{D}{B} \frac{E}{B} \frac{G}{B} \frac{G}{B} \frac{S}{B}$

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LESSON **Exploration Recording Sheet**

6-2 Range, Mean, Median, and Mode

The table shows an ordered list of all the times in the men's 1,500-meter speed-skating competition in the 2002 Winter Olympics. The fastest time was 1:43.95, or 1 minute 43.95 seconds. Notice that all of the times are only seconds apart.

1:43.95	1:44.57	1:45.26	1:45.34	1:45.41	1:45.51	1:45.63	1:45.82
1:45.86	1:45.97	1:45.98	1:46.00	1:46.04	1:46.29	1:46.38	1:46.40
1:46.75	1:46.99	1:47.04	1:47.21	1:47.26	1:47.63	1:47.64	1:47.72
1:47.78	1:47.83	1:48.02	1:48.13	1:48.20	1:48.27	1:48.40	1:48.57
1:48.58	1:48.76	1:49.24	1:49.42	1:49.45	1:49.50	1:49.57	1:50.15
1:50.26	1:50.70	1:51.02	1:51.02	1:51.81	1:52.01	1:52.87	

- How many seconds behind the winner was the second-place skater? the third-place skater? 0.62 s, 1.31 s
- Find the range. (Subtract the fastest time from the slowest time.) 8.92 s
- Find the median. (The median is the number in the middle of the data set.) 1:47.72
- Find the mean. (The mean is the average of all the times.) 1:47.83

Think and Discuss Possible answers are given.

- Discuss whether you think the range, median, or mean best represents the data.

The median or mean best represents the data because the data clusters around a narrow range of times.

- Explain how the mean compares with the median.

The mean is slightly larger than the median.

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LESSON **Practice A**

6-2 Range, Mean, Median, and Mode

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

1.

Length of Worms (in.)	3	5	4	2	6
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range: 4 in.; mean: 4 in.; median: 4 in.; mode: none

2.

Ages of Brothers (yr)	12	16	15	14	8
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range: 8 yr; mean: 13 yr; median: 14 yr; mode: none

3.

Heights of Trees (m)	7	11	9	7	6
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range: 5 m; mean: 8 m; median: 7 m; mode: 7 m

4.

Sizes of Bottled Juice (L)	6	12	12	16	24
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range: 18 L; mean: 14 L; median: 12 L; mode: 12 L

5.

Football Team Wins (games per season)	10	8	10	8	14
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range: 6 games; mean: 10 games; median: 10 games; mode: 8 and 10 games

6.

Student Study Times (hr/wk)	5	7	6	6	11
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range: 6 hr; mean: 7 hr; median: 6 hr; mode: 6 hr

- Tammy is 14 years old. She has a younger sister and an older brother. Her sister is 12 years old. The mean of all their ages is 14. How old is Tammy's brother?

16 years old

- The mode of Nevin's four math quiz scores last month is 85 points. On three of the quizzes, he earned the following scores: 90, 86, and 85. What was the score of Nevin's other quiz?

85 points

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LESSON **Practice B**

6-2 Range, Mean, Median, and Mode

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

1.

School Sit-Up Records (sit-ups per minute)	31	28	30	31	30
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range: 3 sit-ups; mean: 30 sit-ups; median: 30 sit-ups; mode: 30 and 31 sit-ups

2.

Brian's Math Test Scores	86	90	93	85	79	92
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range: 14; mean: 87.5; median: 88; mode: none

3.

Heights of Basketball Players (in.)	72	75	78	72	73
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range: 6 in.; mean: 74 in.; median: 73 in.; mode: 72 in.

4.

Team Heart Rates (beats per min)	70	68	70	72	68	66
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range: 6 bpm; mean: 69 bpm; median: 69 bpm; mode: 68 and 70 bpm

5.

Daily Winter Temperatures (°F)	45	50	47	52	53	45	51
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range: 8°F; mean: 49°F; median: 50°F; mode: 45°F

6.

Daily Theater Ticket Sales	68	74	71	69	74	78	70
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range: 10; mean: 72; median: 71; mode: 74

- Anita has two sisters and three brothers. The mean of all their ages is 6 years. What will their mean age be 10 years from now? Twenty years from now?

16 years; 26 years

- In a class of 28 sixth graders, all but one of the students are 12 years old. Which two data measurements are the same for the student's ages? What are those measurements?

the median and mode; 12 years

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