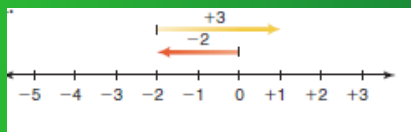


1) $(+1) - (+2)$

2) What is the addition equation for the number line?



3) Represent the subtraction equation with counters:

$(+3) - (-2)$

4) $(-4) - (-2)$

5) $63 \div 9$

6) 50×0.5

7) 123×2

8) What number is divisible by 4? a) 218 b) 120 c) 225

9) What number is divisible by 6? a) 122 b) 240 c) 202

10) $\frac{1}{3}$ of 33



The weekly salaries of six employees at McDonalds are \$140, \$220, \$90, \$180, \$140, \$200.

What is the mean? $\$161.60$

What is the mode? 140

140 220 90 180
140 200

6. Jordin Tootoo is the first Inuk athlete to play in the National Hockey League. On October 9, 2003, he played his first game for the Nashville Predators. This table shows Jordin's statistics when he played junior hockey for the Brandon Wheat Kings.

Jordin Tootoo's Scoring Records 1999-2003				
Year	Games Played	Goals	Assists	Points
1999-2000	45	6	10	16
2000-2001	60	20	28	48
2001-2002	64	32	39	71
2002-2003	51	35	39	74



Find the mean and mode for each set of data.

- a) Games Played
 → b) Goals
 c) Assists
 d) Points

a) ^{mean-} $45, 51, 60, 64 = 220 \div 4 = 55$

mode- none

b) $6, 20, 32, 35 = 93 \div 4 = 23.2$
 mode- none

Bang!

8. **Take It Further** A data set has 6 numbers.
 Four of the numbers are: 6, 3, 7, 9.
 Find the other two numbers in each case.
 a) The mean is 6.
 b) The mode is 3 and the mean is 6.
 Find as many different answers as you can.

a) $3, 6, 7, 9, \overset{2}{8}, \overset{9}{3} = \frac{36}{6} = 6$

$\begin{array}{r} 36 \\ -25 \\ \hline 11 \end{array}$

b) $(3, 3), 6, 7, 8, 9 = 36 \div 6 = 6$

The median of a data set is the middle number when the data are arranged in order.

* When there is an odd number of data, the median is the middle number.

* When there is an even number of data, the median is the mean of the two middle numbers.

* When there is an even number of data, the median might not be one of the numbers in the data set.

4, 6, 7, 14, 20 } 2, 4, 6, 7, 9, 10

$6 + 7 = 13$

$13 \div 2 = 6.5$

- There are 11 Grade 7 students in Ms. Shim's combined Grades 6 and 7 class. To find the median mark on the last science test, she listed their marks from greatest to least:

95, 92, 87, 85, 80, 78, 76, 73, 70, 66, 54

The middle number is 78.

There are 5 marks greater than 78, and 5 marks less than 78.

The median mark is 78.

- Another Grade 7 student transfers to Ms. Shim's class. He writes the same test and receives a mark of 72.

To find the new median, the teacher includes his mark in the ordered list:

95, 92, 87, 85, 80, 78, 76, 73, 72, 70, 66, 54

There are two middle numbers, 78 and 76.

There are 5 marks greater than 78, and 5 marks less than 7

The median is the mean of the 2 middle numbers:

$$(78 + 76) \div 2 = 77$$

The median mark is now 77.

$$78 + 76 = 154 \div 2 = 77$$

The range of a data set tells how spread out the data are.
It is the difference between the greatest and least numbers.

- There are 11 Grade 7 students in Ms. Shim's combined Grades 6 and 7 class.
To find the median mark on the last science test, she listed their marks from greatest to least:

95, 92, 87, 85, 80, 78, 76, 73, 70, 66, 54

The middle number is 78.

There are 5 marks greater than 78, and 5 marks less than 78.

The median mark is 78.

$$95 - 54 = 41$$

2. The Grade 7 students in two combined Grades 6 and 7 classes wrote the same quiz, marked out of 15.

Here are the results:

Class A: 8, 9, 9, 12, 12, 13, 14, 15, 15

Class B: 10, 10, 11, 11, 12, 12, 13, 13, 14, 14

- Find the median mark for each class.
- Find the range of each set of marks.
- Which class do you think is doing better? Explain.

3. a) Find the mean, median, and mode for each data set.

- | | |
|------------------------|----------------------------|
| i) 4, 5, 7, 8, 11 | ii) 50, 55, 65, 70, 70, 50 |
| iii) 7, 63, 71, 68, 71 | iv) 6, 13, 13, 13, 20 |

b) Which data sets have:

- the same values for the mean and median?
What do you notice about the numbers in each set?
- the same values for the mean, median, and mode?
What do you notice about the numbers in each set?
- different values for the mean, median, and mode?
What do you notice about the numbers in each set?

1) Class - $12 + 13 = 25 \div 2 = 12.5$

p. 265
q. 2, 3, 4,
 $12 + 12 = 24 \div 2 = 12$

b) Range - Class A - $15 - 8 = 7$
Range Class B - $14 - 10 = 4$

4. **Assessment Focus** Write two different data sets with 6 numbers, so that:
- a) The mode is 100. The median and the mean are equal.
 - b) The mode is 100. The mean is less than the median.
- Show your work.
5. a) The median height of ten 12-year-old girls is 158 cm.
What might the heights be? How do you know?
- b) The mode height of ten 12-year-old boys is 163 cm.
What might the heights be? How do you know?

7. In 2005, the Edmonton Miners hosted The Minto Cup Junior A Lacrosse Championship. Here are the 2005 statistics, as of June 30, 2005, for 10 players on the team.

Player	Games	Goals	Assists	Points	Penalty Minutes
Jeremy Boyd	13	2	8	10	54
Dan Claffey	11	3	11	14	33
Dalen Crouse	11	10	10	20	6
Andrew Dixon	15	4	5	10	47
Dan Hartzell	11	5	21	26	8
Cole Howell	12	21	13	34	0
Aiden Inglis	12	3	4	7	23
Ryan Polny	17	7	14	21	2
Chris Schmidt	5	8	4	12	2
Neil Tichkowsky	17	34	19	53	8

- a) Calculate the mean, the median, and the mode of each set of data.
- b) Make up a question about the mean, the median, or the mode that can be answered using these data. Answer your question.

