

Algebra 1B
Zimmerman
Week 3 & 4

ALG. 1B

<u>DAY</u>	<u>DATE</u>	<u>LESSON</u>	<u>ASSIGNMENT</u>
MON	MAR. 30	REVIEW WEEK 1	COVID WEEK 1 REVIEW
MON	APR. 6	REVIEW WEEK 2	COVID WEEK 2 REVIEW
MON	APR. 13	REVIEW CH. 11	RWS CH. 11
TUE	APR. 14	REVIEW CH. 11	RWS B CH. 11
WED	APR. 15	TEST CH. 11	TEST CH. 11
THU	APR. 16	12-2 FREQUENCY AND HISTOGRAMS	12-2 PRACTICE EVENS
FRI	APR. 17	12-2 FREQUENCY AND HISTOGRAMS	12-2 PRACTICE ODDS
MON	APR. 20	12-3 MEASURES OF CENTRAL TENDANCY	12-3 PRACTICE EVENS
TUE	APR. 21	12-3 MEASURES OF CENTRAL TENDANCY	12-3 PRACTICE ODDS
WED	APR. 22	12-4 BOX AND WHISKER PLOTS	12-4 PRACTICE 2, 6, 10, 14-17
THU	APR. 23	12-4 BOX AND WHISKER PLOTS	12-4 PRACTICE 1, 5, 9, 14-17
FRI	APR. 24	REVIEW MID CH. 12	RWS MID CH. 12
MON	APR. 27	REVIEW MID CH. 12	RWS B MID CH. 12
TUE	APR. 28	TEST MID CH. 12	TEST MID CH. 12
WED	APR. 29	10-2 SIMPLIFYING RADICAL EXP.	10-2 PRACTICE EVENS
THU	APR. 30	10-2 SIMPLIFYING RADICAL EXP.	10-2 PRACTICE ODDS
FRI	MAY 1	10-3 OPERATIONS WITH RADICALS	10-3 PRACTICE EVENS
MON	MAY 4	10-3 OPERATIONS WITH RADICALS	10-3 PRACTICE ODDS
TUE	MAY 5	REVIEW MID CH. 10	RWS MID CH. 10
WED	MAY 6	REVIEW MID CH. 10	RWS B MID CH. 10
THU	MAY 7	TEST MID CH. 10	TEST MID CH. 10
FRI	MAY 8	SOLVING EQUATIONS	WS SOLVING EQUATIONS #1
MON	MAY 11	SOVLING EQUATIONS	WS SOLVING EQUATIONS #2
TUE	MAY 12	FACTORING	WS FACTORING #1
WED	MAY 13	FACTORING	WS FACTORING #2
THR	MAY 14	SOLVING QUADRATIC EQUATIONS	WS SOLVING QUAD. EQ. #1
FRI	MAY 15	SOLVING QUADRATIC EQUATIONS	WS SOLVING QUAD. EQ. #2
MON	MAY 18	REVIEW LAST TEST	RWS LAST TEST
TUE	MAY 19	REVIEW LAST TEST	RWS LAST TEST
WED	MAY 20	LAST TEST	LAST TEST
THR	MAY 21		
FRI	MAY 22		

***VIDEOS OF EACH NEW LESSON WILL BE UPLOADED TO TEAMS**

***ASSIGNMENTS AND TESTS WILL ALSO BE UPLOADED TO TEAMS**

***IF YOU CAN'T ACCESS TEAMS, HARD COPIES OF ASSIGNMENTS AND TESTS
WILL BE AVAILABLE FOR PICKUP AT SCHOOL.**

Simplify each rational expression COMPLETELY. State the excluded values.

1. $\frac{3a^2b^3}{12a^4b}$

2. $\frac{a^2 - 7a + 10}{a^2 - 6a + 8}$

ANSWERS

1) _____

2) _____

Find each product and simplify COMPLETELY.

3. $\frac{25a^2b}{5b^2c} \cdot \frac{b}{a}$

4. $\frac{2x+2}{x^2-4x+3} \cdot \frac{x-1}{6x+6}$

3) _____

4) _____

5. $\frac{x^2-2x-15}{x^4} \cdot \frac{x^3}{x+3}$

6. $\frac{2d^2-d-6}{6d^2+11d+3} \cdot \frac{3d^2-8d-3}{d^2+4d-12}$

5) _____

6) _____

Find each quotient and simplify COMPLETELY.

7. $\frac{12a^4}{xy^2} \div \frac{4a^3}{xy}$

8. $\frac{7x+7}{x-1} \div \frac{x^2+7x+6}{2x-2}$

7) _____

8) _____

Find each sum or difference and simplify COMPLETELY.

9. $\frac{4}{y} - \frac{5y}{2}$

10. $\frac{5x+1}{2x^2-x-6} - \frac{3x-2}{2x^2-x-6}$

9) _____

10) _____

11. $\frac{4}{5x^2} + \frac{3}{2x}$

12. $\frac{3}{a-2} - \frac{2}{a+4}$

11) _____

12) _____

Solve each equation. Check your solutions. State any extraneous solutions you had to discard.

13. $\frac{1}{2-a} + 2 = \frac{4}{2-a}$

14. $\frac{8}{x+3} = \frac{1}{x} + 1$

13. _____

14) _____

15. $\frac{2}{x-2} + \frac{1}{4} = \frac{3}{x-2}$

16. $-\frac{2}{a} - \frac{4}{a-3} = \frac{3}{2}$

15) _____

16) _____

17. $\frac{3}{a} - 1 = \frac{2}{a+2} - 2$

18. $\frac{c+2}{c} - \frac{4}{3c} = 11$

17) _____

18) _____

19. $\frac{2}{b} + \frac{1}{b^2} + \frac{b^2+b}{b^3} = \frac{1}{b}$

20. $\frac{3w+5}{4w^2} = \frac{1}{w^2} - \frac{w-3}{4w^2}$

19) _____

20) _____

Bonus

$$\begin{array}{r} x+5 \\ \hline x^2-4x-21 \\ \hline 2x^2+13x+15 \\ \hline x^2-49 \end{array}$$

BONUS: _____

Simplify each rational expression COMPLETELY. State the excluded values.

1. $\frac{16a^3b^2}{40a^4b}$

2. $\frac{y^2 - 49}{y + 7}$

3. $\frac{2d + 12}{d^2 + d - 30}$

4. $\frac{b^2 + 10b + 21}{b^2 + 2b - 35}$

Find each product and simplify COMPLETELY.

5. $\frac{14x^3y}{7y^4z} \cdot \frac{y^2}{x}$

6. $\frac{x^2 + x - 20}{x^2} \cdot \frac{x}{x + 5}$

7. $\frac{4x + 4}{x^2 - x - 2} \cdot \frac{x - 3}{2x + 2}$

8. $\frac{y^2 - y - 6}{y - 2} \cdot \frac{3y - 6}{y + 2}$

9. $\frac{r^2 + 8r + 15}{r^2 + 2r - 3} \cdot \frac{5r + 25}{r^2 - 25}$

10. $\frac{2b^2 + b - 3}{6b^2 + 7b - 3} \cdot \frac{3b^2 + 7b + 4}{b^2 - 2b + 1}$

Find each quotient and simplify COMPLETELY.

11. $\frac{6m^3}{np^2} \div \frac{2m}{np}$

12. $\frac{m^2-9}{m} \div (m+3)$

13. $\frac{a^2-5a+6}{3} \div \frac{a-3}{a-2}$

14. $\frac{5x+5}{x-1} \div \frac{x^2+3x+2}{10x-10}$

15. $\frac{y^2+10y+25}{3y-9} \div \frac{y+5}{y-3}$

16. $\frac{12}{5y} + \frac{8}{5y}$

17. $\frac{x}{x+4} + \frac{4}{x+4}$

18. $\frac{5}{3b^2} + \frac{3}{4b}$

19. $\frac{5}{a+3} - \frac{2}{a-2}$

20. $\frac{8}{x} - \frac{3x}{4}$

21. $\frac{3x+4}{x^2+9x+20} - \frac{2x-1}{x^2+9x+20}$

22. $\frac{\frac{y-3}{y^2-3y-10}}{\frac{y^2+2y-15}{y^2-25}}$

Simplify each rational expression COMPLETELY. State the excluded values.

1. $\frac{5a^3b^2}{50a^5b}$

2. $\frac{a^2-5a+6}{a^2-8a+15}$

ANSWERS

1) _____

2) _____

Find each product and simplify COMPLETELY.

3. $\frac{15a^2b}{3b^2c} \cdot \frac{b}{a}$

4. $\frac{3x+3}{x^2-3x+2} \cdot \frac{x-2}{5x+5}$

3) _____

4) _____

5. $\frac{x^2+x-12}{x^3} \cdot \frac{x^2}{x+4}$

6. $\frac{2b^2-b-6}{6b^2+11b+3} \cdot \frac{3b^2-5b-2}{b^2+2b-8}$

5) _____

6) _____

Find each quotient and simplify COMPLETELY.

7. $\frac{6a^3}{xy^2} \div \frac{3a^2}{xy}$

8. $\frac{4x+4}{x-1} \div \frac{x^2+5x+4}{3x-3}$

7) _____

8) _____

Find each sum or difference and simplify COMPLETELY.

9. $\frac{5}{x} - \frac{3x}{4}$

10. $\frac{6x+6}{3x^2+x-4} - \frac{3x+2}{3x^2+x-4}$

9) _____

10) _____

11. $\frac{4}{3x^2} + \frac{5}{2x}$

12. $\frac{3}{a-3} - \frac{2}{a+2}$

11) _____

12) _____

Solve each equation. Check your solutions. State any extraneous solutions you had to discard.

13. $\frac{1}{2-j} + 2 = \frac{4}{2-j}$

14. $\frac{3}{2p-2} - 1 = \frac{4}{p-1} + 2$

13. _____

14) _____

15. $\frac{2}{x-2} + \frac{3}{4} = \frac{2}{x-2}$

16. $-\frac{3}{a} - \frac{3}{a-3} = \frac{3}{2}$

15) _____

16) _____

17. $\frac{4}{n} - 1 = \frac{2}{n+2} - 1$

18. $\frac{p+7}{p+2} - 2 = \frac{2-p}{p+4}$

17) _____

18) _____

19. $\frac{3}{m^2} = \frac{m-4}{3m^2} + \frac{2}{3m^2}$

20. $\frac{3n+5}{4n^2} = \frac{1}{n^2} - \frac{n-3}{4n^2}$

19) _____

20) _____

Bonus
$$\frac{\frac{x+2}{x^2-x-20}}{\frac{2x^2+7x+6}{x^2-16}}$$

BONUS: _____

12-2 Practice

Frequency and Histograms

Form G

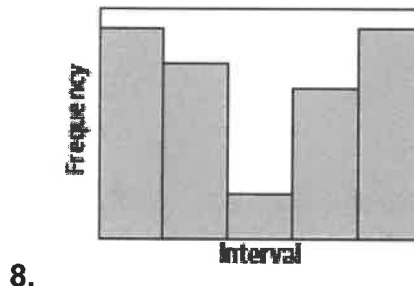
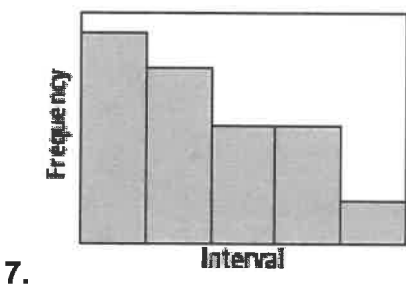
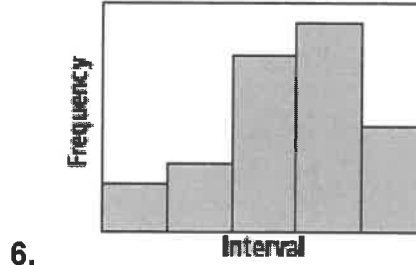
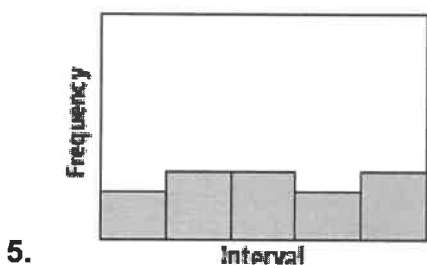
Use the data to make a frequency table.

1. runs per game: 5 4 3 6 1 9 3 4 2 2 0 7 5 1 6
2. weight (lb): 10 12 6 15 21 11 12 9 11 8 8 13 10 17

Use the data to make a histogram.

3. number of pages: 452 409 355 378 390 367 375 514 389 438 311 411 376
4. price per yard: \$9 \$5 \$6 \$4 \$8 \$9 \$12 \$7 \$10 \$4 \$5 \$6 \$6 \$7

Tell whether each histogram is *uniform*, *symmetric*, or *skewed*.



12-2 Practice (continued)

Frequency and Histograms

Form G

Use the data to make a cumulative frequency table.

9. call length (min): 3 5 12 39 12 3 15 23 124 2 1 1 7 19 11 6

10. package weight (kg): 1.25 3.78 2.2 12.78 3.15 4.98 3.45 9.1 1.39

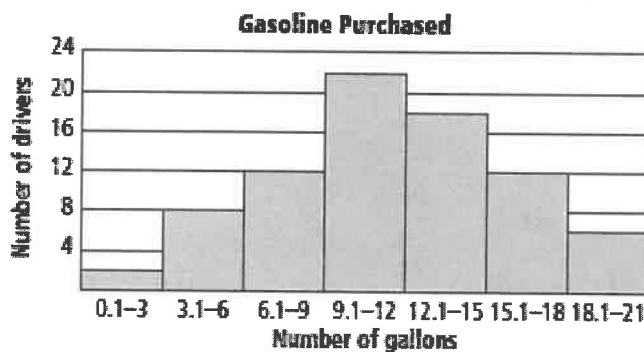
Use the snowfall amounts, in inches, below.

10 2.5 1.5 3 6 8.5 9 12 2 0.5 1 3.25 5 6.5 10.5 4.5 8 8.5

11. What is a histogram of the data that uses intervals of 2?

12. What is a histogram of the data that uses intervals of 4?

The amount of gasoline that 80 drivers bought to fill their cars' gas tanks is shown.



13. Which interval represents the greatest number of drivers?

14. How many drivers bought more than 12 gallons?

15. How many drivers bought 9 gallons or less?

12-3 Practice

Form G

Measures of Central Tendency and Dispersion

Find the mean, median, and mode of each data set. Explain which measure of central tendency best describes the data.

- 1.**
- touchdowns scored:

1 3 4 4 3

- 2.**
- distance from school (mi):

0.5 3.9 4.1 5 3

- 3.**
- average speed (mi/hr):

36 59 47 56 67

- 4.**
- price per pound:

\$30 \$8 \$2 \$5 \$6

- 5.**
- daily high temperature (
- $^{\circ}\text{F}$
-):

74 69 78 80 92

- 6.**
- number of volunteers:

24 22 35 19 35

Find the value of x such that the data set has the given mean.

- 7.**
- 11, 12, 5, 3,
- x
- ; mean 7.4

- 8.**
- 55, 60, 35, 90,
- x
- ; mean 51

- 9.**
- 6.5, 4.3, 9.8, 2.2,
- x
- ; mean 4.8

- 10.**
- 100, 112, 98, 235,
- x
- ; mean 127

- 11.**
- 1.2, 3.4, 6.7, 5.9,
- x
- ; mean 4.0

- 12.**
- 34, 56, 45, 29,
- x
- ; mean 40

- 13.** One golfer's scores for the season are 88, 90, 86, 89, 96, and 85. Another golfer's scores are 91, 86, 88, 84, 90, and 83. What are the range and mean of each golfer's scores? Use your results to compare the golfers' skills.

Find the range and mean of each data set. Use your results to compare the two data sets.

- 14.**
- Set A: 5 4 7 2 8

Set B: 3 8 9 2 0

- 15.**
- Set C: 1.2 6.4 2.1 10 11.3

Set D: 8.2 0 3.1 6.2 9

- 16.**
- Set E: 12 12 0 8

Set F: 1 15 10 2

- 17.**
- Set G: 22.4 20 33.5 21.3

Set H: 6.2 15 50.4 28

- 18.** The heights of a painter's ladders are 12 ft, 8 ft, 4 ft, 3 ft, and 6 ft. What are the mean, median, mode, and range of the ladder heights?

12-3 Practice (continued)

Form G

Measures of Central Tendency and Dispersion

Find the mean, median, mode, and range of each data set after you perform the given operation on each data value.

19. 4, 7, 5, 9, 5, 6; add 1

20. 23, 21, 17, 15, 12, 11; subtract 3

21. 1.1, 2.6, 5.6, 5, 6.7, 6; add 4.1

22. 5, 2, 8, 6, 11, 1; divide by 2

23. 12.1, 13.6, 10, 9.7, 13.2, 14; divide by 0.5

24. 3.2, 4.4, 6, 7.8, 3, 2; subtract -4

25. The lengths of Ana's last six phone calls were 3 min, 19 min, 2 min, 44 min, 120 min, and 4 min. Greg's last six phone calls were 5 min, 12 min, 4 min, 80 min, 76 min, and 15 min. Find the mean, median, mode, and range of Ana's calls and Greg's calls. Use your results to compare each person's phone call habits.

26. The table shows a basketball player's scores in five games. How many points must the basketball player score in the next game to achieve an average of 13 points per game?

Game	Points
Westlake	10
Davis	14
Mason	8
Leeberg	18
Warren	11

27. You and a friend weigh your loaded backpack every day for a week. The results are shown in the table. Find the mean, median, mode, and range of the weights of your backpack and your friend's backpack. Use your results to compare the backpack weights.

Day	Weight (lbs)	
	Yours	Friend
Monday	13.5	12.6
Tuesday	12.2	13
Wednesday	13.2	12.8
Thursday	11.6	11.6
Friday	10.5	12.5

28. Over six months, a family's electric bills averaged \$55 per month. The bills for the first five months were \$57.60, \$60, \$53.25, \$50.75, and \$54.05. What was the electric bill in the sixth month? Find the median, mode, and range of the six electric bills.

12-4

Practice

Form G

Box-and-Whisker Plots

Find the minimum, first quartile, median, third quartile, and maximum of each data set.

1. 220 150 200 180 320 330 300

2. 14 18 12 17 14 19 18

3. 33.2 45.1 22.3 76.7 41.9 39 32.2

4. 5 8 9 7 11 4 9 4

5. 1.4 0.2 2.3 1.0 0.8 2.4 0.9 2.1

6. 90 47 88 53 59 72 68 62 79

Make a box-and-whisker plot to represent each set of data.

7. snack prices: \$0.99 \$0.85 \$1.05 \$3.25 \$1.49 \$1.35 \$2.79 \$1.99

8. ticket buyers: 220 102 88 98 178 67 42 191 89

9. marathon race finishers: 3,869 3,981 3,764 3,786 4,310 3,993 3,258

10. winning times (min): 148 148 158 149 164 163 149 156

11. ticket prices: \$25.50 \$45 \$24 \$32.50 \$32 \$20 \$38.50 \$50 \$45

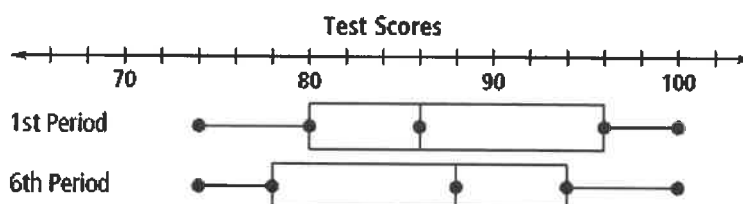
12. head circumference (cm): 60.5 54.5 55 57.5 59 58.5 58.5 57 56.75 57

12-4 Practice (continued)

Box-and-Whisker Plots

Form G

13. Use the box-and-whisker plot below. What does it tell you about the test scores in each class? Explain.



14. Of 200 golf scores during a city tournament, 32 are less than or equal to 90. What is the percentile rank of a score of 90?
15. Of 25 dogs, 15 weigh more than 35 pounds. What is the percentile rank of a dog that weighs 35 pounds?
16. The table shows how many votes each student who ran for class president received. What is Li's percentile rank?

Student	Votes
Brooke	112
Li	100
Suman	118
Greg	98
Grace	98

17. Ten students earned the following scores on a test: 89, 90, 76, 78, 83, 88, 91, 93, 96, and 90. Which score has a percentile rank of 90? Which score has a percentile rank of 10?

Make box-and-whisker plots to compare the data sets.

18. Test scores:

Andrew's: 79 80 87 87 99 94 77 86

Dipak's: 93 79 78 82 91 87 80 99

19. Monthly sales:

Kiera's: 17 50 26 39 6 49 62 40 8

Paul's: 18 47 32 28 12 49 60 28 15

Name: _____ Date: _____ Per.: _____

Chap 12 RWS

Make 3 histograms that are: Symmetric, Skewed, and Uniform.



1. Symmetric



2. Skewed



3. Uniform

4. Use the data to make a frequency table.

Nascar speeds: 130, 120, 30, 50, 250, 176, 80, 225, 98, 185, 200

5. Use the data to make a histogram.

MPG for cars: 12, 5, 14, 3, 16, 21, 25, 3, 18, 29, 34, 37, 21, 10



Name: _____ Date: _____ Per.: _____

Chap 12 RWS

6. Use the data to make a cumulative frequency table.

Distance run: 8, 19, 2, 4, 3, 8, 10, 1, 2, 5, 3, 10, 20, 8, 15, 18, 6, 5, 18

7. Find the mean _____, median _____, and mode _____ of the data set. Tell which measure of central tendency best describes the data. _____

12, 18, 19, 10, 12, 15, 15, 17

8. Find the value of x such that the data set has the given mean. _____

85, 70, 83, 78, x ; Mean = 80

9. Find the minimum, first quartile, median, third quartile, and maximum of the data set.

38, 54, 28, 33, 30, 42, 36, 44, 50

10. Make a box and whisker plot to represent the set of data. What is the interquartile range?

328 322 448 274 445 539 272 230 266 434

11. Students taking a make-up test receive the following grades:

63, 78, 82, 71, 93, 91, 80, 69, 84, and 50. Which grade has a percentile rank of 70? _____