Summer
Math Exercises

*For students who
are entering*

Algebra 1

It has been discovered that idle students lose learning over the summer months. To help you succeed next fall—and perhaps to help you learn some lessons that you did not learn the first time through—we have prepared the following packet of math exercises to be completed over the summer. It is clear that most students do not want to spend their entire summer doing math work. Based on how fast or slow you work, you may find that you only need to do math a few days a week. Working on this packet will be most effective if you do work throughout the summer so try not to skip weeks. You may use the following chart to get an idea of how often you might need to work problems:

Into Alg 1

Problems: 210

Min/Day	Min/Prob	Prob/Day	Sessions
60	2	30	7
60	3	20	10
60	5	12	17
45	2	22.5	9
45	3	15	14
45	5	9	23
30	2	15	14
30	3	10	21
30	5	6	35

For example, if you work on math for 60 minutes per session and took 2 minutes per problem, you could complete 30 problems a day. That would equate to only about 7 sessions of working math problems over the summer. At the other end of the spectrum, if you want to work only 30 minutes each time and took on average 5 minutes to complete each problem, you would only get 6 problems done during a session and would have to do about 35 sessions to complete the work (i.e., math work about every other day during the summer break). Note that students who learned the material previously should not take more than an average of 5 minutes to work a problem.

This work is **MANDATORY** for CCHS and CCA students. Please follow these guidelines:

- Complete the problems assigned on the next page.

- Bring the completed work to the **first day of classes** so you will get credit.

- Use PENCIL and **write legibly**.

- **Do all your work on separate sheets of paper**. Note that some sections indicated that calculators are not to be used. Show your work for these problems as needed.

- Identify each section with a header (e.g, Lesson 1.1) and number each problem.

- Please circle your answers.

Assignment for students entering Algebra 1

Work all the problems in the Sections attached as follows:

Section	Problems	No of Problems	No Calculator	Date Completed
1.1	4-68 every 4th	17		
1.2	3-33 every 3rd	11		
1.3	3-45 every 3rd	15	X	
1.4	3-30 every 3rd	10	X	
2.2	3-12 every 3rd	4		
3.1	3-27 every 3rd	9		
3.2	2-20 even	10		
3.3	4-60 every 4th	15	X	
3.4	2-26 even	13	X	
5.1	3-33 every 3rd	11		
5.2	6-42 every 3rd	13	X	
5.3	3-48 every 3rd	16	X	
5.4	3-48 every 3rd	16	X	
Assessment	1-50 all	50	X	
Total		**210**		

NAME _____ DATE _____

Practice

For use with Lesson 1.1: Factors and Multiples

List all the factors of the number.

1. 15   **2.** 26   **3.** 99   **4.** 35

5. 144   **6.** 49   **7.** 61   **8.** 56

9. 72   **10.** 98   **11.** 63   **12.** 196

Write the prime factorization of the number. If a number is prime, write *prime*.

13. 16   **14.** 17   **15.** 9   **16.** 27

17. 20   **18.** 42   **19.** 81   **20.** 256

21. 65   **22.** 73   **23.** 55   **24.** 48

25. 120   **26.** 252   **27.** 133   **28.** 101

List all the common factors of the pair of numbers.

29. 25, 14   **30.** 40, 72   **31.** 6, 54   **32.** 12, 24

33. 35, 36   **34.** 51, 17   **35.** 8, 56   **36.** 45, 18

Find the greatest common factor of the pair of numbers.

37. 12, 15   **38.** 17, 85   **39.** 48, 56   **40.** 42, 72

41. 35, 36   **42.** 11, 23   **43.** 26, 34   **44.** 57, 102

45. 13, 120   **46.** 64, 125   **47.** 104, 22   **48.** 150, 240

49. 300, 550   **50.** 458, 310   **51.** 6, 8, 12   **52.** 14, 63, 84

Find the least common multiple of the pair of numbers.

53. 4, 12   **54.** 24, 18   **55.** 20, 25   **56.** 9, 15

57. 14, 21   **58.** 13, 16   **59.** 28, 32   **60.** 23, 56

61. 17, 51   **62.** 64, 32   **63.** 72, 144   **64.** 48, 60

65. 75, 100   **66.** 15, 25, 75   **67.** 5, 6, 10   **68.** 22, 55, 60

Topic 1

Practice

For use with Lesson 1.2: Comparing and Ordering Numbers

Compare the two numbers. Write the answer using <, =, or >.

1. 12,868 and 14,653   **2.** 643 and 623   **3.** 26,555 and 26,653

4. 24.53 and 26.98   **5.** 0.00652 and 0.6052   **6.** 84.35 and 84.3

7. 6003.7 and 6307.04   **8.** 571,364 and 571,377   **9.** 0.168 and 0.0085

10. $\frac{3}{8}$ and $\frac{5}{8}$ **11.** $2\frac{4}{7}$ and $1\frac{11}{7}$ **12.** $\frac{4}{5}$ and $\frac{3}{4}$

13. $\frac{8}{36}$ and $\frac{2}{9}$ **14.** $\frac{5}{9}$ and $\frac{1}{2}$ **15.** $6\frac{5}{13}$ and $5\frac{3}{5}$

16. $\frac{1}{3}$ and $\frac{1}{4}$ **17.** $5\frac{3}{4}$ and $\frac{23}{4}$ **18.** $\frac{2}{3}$ and $\frac{6}{8}$

19. 75,663 and 75.663.01   **20.** 265.05 and 265.01   **21.** 8978.99 and 8979

Write the numbers in order from least to greatest.

22. 8450, 8054, 5840, 8455   **23.** 23,546, 23,766, 20,599, 21,431

24. 12.52, 21.25, 12.05, 21.257   **25.** 7.0056, 7.059, 7.0074, 7.0008

26. $\frac{2}{3}, \frac{3}{4}, \frac{1}{6}, \frac{7}{8}$ **27.** $\frac{1}{2}, \frac{3}{10}, \frac{1}{4}, \frac{3}{5}, \frac{9}{20}$

28. $7\frac{7}{9}, 7\frac{1}{2}, 8\frac{1}{6}, 7\frac{2}{3}, 8\frac{5}{18}$ **29.** $\frac{9}{7}, 1\frac{2}{5}, 1\frac{1}{10}, \frac{55}{35}$

30. $\frac{11}{9}, \frac{13}{3}, \frac{17}{11}, \frac{15}{9}$ **31.** $14\frac{1}{3}, 15\frac{4}{5}, 14\frac{13}{15}, 15\frac{1}{2}$

32. Glen finished the 5K race in 20.75 minutes. Mark finished the race in 20.36 minutes. Which runner finished the race first?

33. You need $10\frac{2}{3}$ feet of shelving to make shelves for a pantry. The salesperson at the home improvement store gives you $10\frac{1}{2}$ feet of shelving. Did the salesperson give you enough to complete the project?

Topic 1

Practice

**For use before Lesson 1.3: Whole Number and Decimal Operations**

For Exercises 1–21, find the sum or difference.

1. $49 + 81$ **2.** $112 + 254$ **3.** $74 - 53$

4. $117 - 59$ **5.** $7.92 + 6.5$ **6.** $12.36 + 9$

7. $3.42 - 2.4$ **8.** $18.95 - 4$ **9.** $24 - 5.36$

10. $0.681 + 5.5$ **11.** $28.012 + 94.3$ **12.** $0.88 - 0.39$

13. $5.452 - 2.91$ **14.** $28.3 + 8.624$ **15.** $86 - 77.41$

16. $843 + 33.29$ **17.** $0.00902 - 0.00887$ **18.** $199.9938 + 95.992$

19. $7.56 - 2.019 + 5.451$ **20.** $2.25 + 7.789 - 4.342$ **21.** $11.010 + 5.672 - 8.999$

In Exercises 22–42, find the product or quotient.

22. 6.25×6.5 **23.** 0.26×9.58 **24.** $133.6 \div 8$

25. $39.2 \div 7$ **26.** $2.43 \div 0.03$ **27.** 4.25×12.35

28. $57.3 \div 0.003$ **29.** 0.15×24 **30.** $231.84 \div 12.6$

31. $42.37 \div 1.9$ **32.** 10×57.86 **33.** $2.8 \div 0.7$

34. $8.37 \div 0.27$ **35.** 0.985×2.5 **36.** 7.71×9.44

37. $100.38 \div 21$ **38.** $84.4 \div 0.02$ **39.** 64×3.51

40. 183.62×2.834 **41.** $150.375 \div 80.2$ **42.** $2712.15 \div 35$

43. You bought a shirt for $24.00, a pair of pants for $25.99, and shoes for $12.45. How much did you spend altogether?

44. You give the cashier $55.50 for a grocery bill of $51.47. How much change will you get back?

45. Find the area of the rectangle below.

13.5 cm

15.2 cm

NAME _____ DATE _____
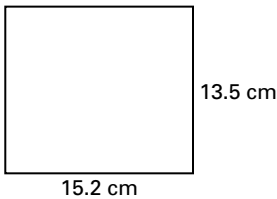
Practice

For use before Lesson 1.4: Fraction Operations

For Exercises 1–12, find the sum or difference.

1. $\frac{3}{6} + \frac{4}{6}$

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

3. $\frac{6}{9} - \frac{1}{6}$

4. $\frac{1}{7} + \frac{1}{14}$

5. $\frac{5}{7} - \frac{1}{3}$

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

7. $7\frac{3}{5} + 5\frac{1}{5}$

8. $5\frac{5}{12} - 2\frac{7}{8}$

9. $8\frac{2}{3} - 1\frac{2}{9}$

10. $2\frac{7}{10} + 8\frac{1}{2}$

11. $6\frac{2}{5} - 2\frac{1}{3}$

12. $15\frac{1}{16} - 12\frac{3}{4}$

For Exercises 13–15, find the reciprocal of the number.

13. $\frac{1}{2}$

14. 25

15. $5\frac{7}{8}$

For Exercises 22–30, multiply or divide.

16. $\frac{2}{3} \times 9$

17. $4 \times \frac{6}{11}$

18. $\frac{5}{7} \times \frac{3}{4}$

19. $\frac{4}{9} \times \frac{1}{2} \times \frac{1}{3}$

20. $\frac{4}{8} \times \frac{3}{5} \times \frac{1}{2}$

21. $\frac{7}{8} \times \frac{2}{7}$

22. $4\frac{2}{7} \times \frac{1}{5}$

23. $1\frac{1}{8} \times 5\frac{1}{2}$

24. $\frac{13}{4} \div \frac{2}{3}$

25. $2\frac{7}{8} \div \frac{1}{2}$

26. $\frac{5}{8} \div \frac{1}{6}$

27. $\frac{22}{5} \div \frac{1}{3}$

28. $2\frac{2}{5} \div 2\frac{1}{3}$

29. $4\frac{1}{6} \div 5$

30. $9\frac{1}{4} \div \frac{3}{8}$

31. You need $2\frac{1}{2}$ cups of flour for your favorite cookie recipe. The only measuring cup you have holds $\frac{1}{4}$ cup of flour. How many times do you have to fill the measuring cup?

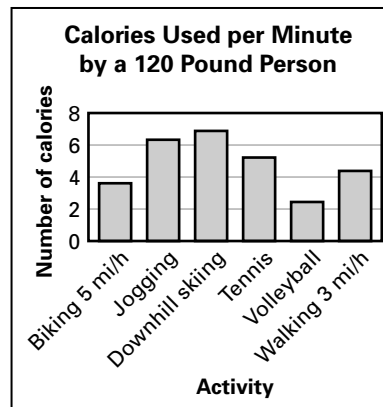**32.** You want to double the cookie recipe in Exercise 31. How many cups of flour do you need?

Topic 1

NAME _____ DATE _____

Practice

For use with Lesson 2.2: Bar Graphs and Line Graphs

For Exercises 1–6, use the bar graph at the right.

**For Exercises 1–3, estimate the number of calories used per minute for each activity.**

1. walking at a rate of 3 mi/h

2. tennis

3. jogging

4. For which of the listed activities would a 120 lb person use more than 5 calories per minute?

5. Which activity produces a calorie use about twice that of volleyball?

6. About how many calories would a 120 lb person use if he or she rode a bicycle at a rate of 5 mi/h for half an hour?

Calories Used per Minute by a 120 Pound Person

Number of calories

Activity: Biking 5 mi/h, Jogging, Downhill skiing, Tennis, Volleyball, Walking 3 mi/h

For Exercises 7–11, use the line graph.

For Exercises 7 and 8, estimate the number of computers per 1000 people each year.

7. 1992

8. 1994

9. In what year were there about 35 computers per 1000 people worldwide?

10. In what year did the number of computers per 1000 people pass 40 for the first time?

11. By approximately how much did the number of computers per 1000 people increase from 1991 to 1995?

Computers Worldwide

Computers per 1000 people

Years since 1990
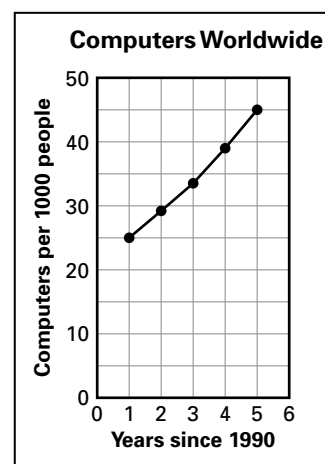
12. Draw a bar graph to display the data in the table.

Sites of the Olympic Games by Continent (1896–2002)

Continent	Asia	Australia	Europe	North America
Games held	4	2	27	11

13. Draw a line graph to display the data in the table.

Outstanding Consumer Credit in the United States

Year	1990	1991	1992	1993	1994	1995
Amount owed (billions of dollars)	752	745	757	807	925	1132

Topic 2

NAME _____ DATE _____

Practice

For use with Lesson 3.1: Rates and Ratios

The table below shows the approximate number of men and women on active duty in the United States armed forces in 1995.

Branch	*Number of women (thousands)*	*Number of men (thousands)*
Army	68	507
Air Force	64	400
Navy	56	438
Marine Corps	8	174

Use the table to write each ratio in lowest terms.

1. women to men in the Air Force

2. men to women in the Marine Corps

3. women in the Navy to women in the Marine Corps

4. men in the Navy to men in the Marine Corps

5. women in the Army to women in all four branches of the armed services

Write each ratio in lowest terms.

6. 63 to 35   **7.** 120 to 80

8. 28 ft:6 in.   **9.** 6 lb to 4 oz

10. 10 m to 2 cm   **11.** 3 days to 8 h

12. 3 h:15 min   **13.** $12 to $2.50

14. 2 days to 3 h   **15.** 1 yd to 18 in.

Write the unit rate.

16. 270 mi in 6 h   **17.** $51 in 6 h

18. 16 lb in 8 weeks   **19.** $30 for 4 tickets

20. $8.25 for 3 lb   **21.** 300 words in 5 min

22. 15 m in 2 s   **23.** $1800 in 12 months

24. $21 for 15 gal   **25.** 180 km in 2 h

26. 135 revolutions in 3 min   **27.** 200 students to 8 teachers

Topic 3

NAME _____ DATE _____

Practice

For use with Lesson 3.2: Equal Rates

Match the fraction with its diagram. Write an equivalent fraction that is represented by the diagram.

A. B. C. D.
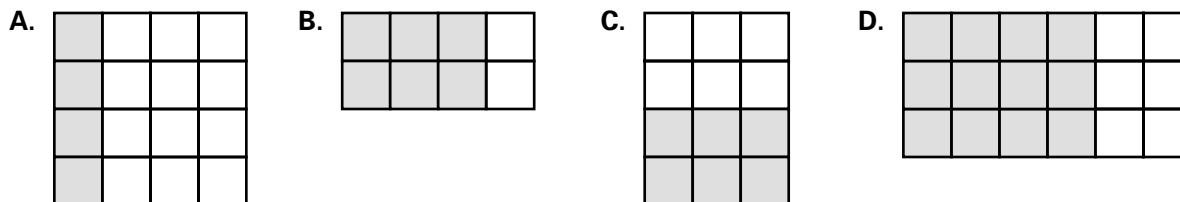
1. $\dfrac{2}{3}$ **2.** $\dfrac{3}{4}$ **3.** $\dfrac{1}{4}$ **4.** $\dfrac{1}{2}$

Find the missing number.

5. $\dfrac{3}{7} = \dfrac{?}{42}$ **6.** $\dfrac{5}{8} = \dfrac{25}{?}$ **7.** $\dfrac{12}{34} = \dfrac{?}{17}$ **8.** $\dfrac{2}{?} = \dfrac{8}{36}$

**Write three equivalent fractions. Tell why they are equivalent.**

9. $\dfrac{6}{11}$ **10.** $\dfrac{4}{9}$ **11.** $\dfrac{7}{14}$ **12.** $\dfrac{5}{16}$

Is the statement true or false? If it is false, change the bold number to make the statement true.

13. $\dfrac{7 \text{ inches}}{12 \text{ inches}} = \dfrac{21 \text{ inches}}{\mathbf{36} \text{ inches}}$ **14.** $\dfrac{300 \text{ miles}}{5 \text{ hours}} = \dfrac{\mathbf{55} \text{ miles}}{1 \text{ hour}}$

15. $\dfrac{18}{24} = \dfrac{3}{\mathbf{8}}$ **16.** $\dfrac{4 \text{ boys}}{6 \text{ girls}} = \dfrac{\mathbf{14} \text{ boys}}{21 \text{ girls}}$

Find the missing side of the rectangle. The ratio of the width to the length is given.

17. 2 to 5

?

25 cm

18. 8 to 12

2 ft

?
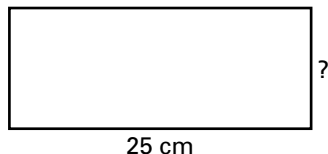
19. *Running* Tyler ran 10 miles in 75 minutes. Brian ran 4 miles in 30 minutes. Did they run at the same rate? Explain.

20. *Scale Drawing* On a blueprint for a house, the ratio of the drawing to the house is 2 centimeters to 7 feet. If the wall in one bedroom has a length of 14 feet, what is the length of the wall on the blueprint?

Algebra 1
Basic Skills Workbook: Diagnosis and Remediation

NAME _____ DATE _____

Practice

For use with Lesson 3.3: Fractions, Decimals, and Percents

Write each fraction or mixed number as a decimal.

1. $\frac{6}{8}$ **2.** $\frac{7}{10}$ **3.** $\frac{1}{3}$ **4.** $\frac{13}{30}$

5. $8\frac{1}{4}$ **6.** $\frac{9}{16}$ **7.** $5\frac{37}{50}$ **8.** $\frac{3}{11}$

Write each fraction or mixed number in lowest terms.

9. $6\frac{7}{14}$ **10.** $\frac{3}{18}$ **11.** $\frac{15}{27}$ **12.** $\frac{72}{100}$

13. $\frac{13}{26}$ **14.** $5\frac{12}{15}$ **15.** $7\frac{8}{52}$ **16.** $2\frac{24}{36}$

Write each fraction or mixed number as a percent.

17. $\frac{4}{5}$ **18.** $\frac{1}{8}$ **19.** $\frac{17}{20}$ **20.** $\frac{5}{2}$

21. $\frac{9}{10}$ **22.** $5\frac{3}{4}$ **23.** $\frac{45}{50}$ **24.** $\frac{1}{3}$

25. $\frac{15}{40}$ **26.** $1\frac{2}{5}$ **27.** $2\frac{1}{25}$ **28.** $7\frac{49}{50}$

Write each percent as a decimal.

29. 51% **30.** $52.\overline{3}\%$ **31.** 102% **32.** $2\frac{1}{2}\%$

33. $\frac{3}{4}\%$ **34.** 0.1% **35.** 9% **36.** 234%

Write each percent as a fraction or mixed number in lowest terms.

37. 99% **38.** 125% **39.** 50% **40.** 3%

41. $\frac{3}{4}\%$ **42.** $12\frac{1}{2}\%$ **43.** 150% **44.** 8%

45. 2% **46.** 4% **47.** 225% **48.** 120%

Write each decimal as a percent and as a fraction or mixed number in lowest terms.

49. 0.25 **50.** 0.675 **51.** 1.2 **52.** 0.128

53. 0.06 **54.** 0.375 **55.** 0.76 **56.** 5.6

57. 0.44 **58.** 4.75 **59.** 0.001 **60.** 1.01

Topic 3

Practice

For use with Lesson 3.4: Find a Percent of a Number

Find each number.

1. 30% of 80   **2.** 20% of 30

3. 15% of 240   **4.** 85% of 300

5. 55% of 125   **6.** 120% of 42

7. 70% of 28   **8.** 62% of 108

9. 83% of 150   **10.** 47% of 356

11. 165% of 684   **12.** 0.5% of 19

13. 25% of 25.99   **14.** 33% of 6574

15. 85% of 186.3   **16.** 112% of 487.6

17. If the sales tax rate is 6.5%, how much tax will you pay for an item whose price is $20?

18. The regular price of a book is $16.40. A store is having a 20% off sale. How much is the discount? What is the sale price?

19. You have a collection of 123 books. If about 40% of these books are mysteries, how many mysteries do you have in your collection?

20. You work in a restaurant for $5.75 per hour. You are given an 8% raise. What is your new hourly wage?

21. During the summer you mow lawns and do yard work. Last summer you charged $6.75 per hour. This year you decide to raise your rate 16%. What is the new rate per hour?

In Exercises 22–26, use the table at the right. It shows the percent of urban land area and rural land area of the total land area for different states. Find the area of each state that is considered urban area and rural area.

State	*Urban*	*Rural*
Vermont	1.5%	98.5%
California	5.2%	94.8%
Delaware	10.7%	89.3%
New Jersey	32.7%	67.3%
Nevada	0.9%	99.1%

22. Vermont   9,249.3 square miles

23. California   155,973.2 square miles

24. Delaware   1,954.6 square miles

25. New Jersey   7,418.8 square miles

26. Nevada   109,805.5 square miles

Topic 3

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Practice

For use with Lesson 5.1: Integer Concepts

Graph the integers on a number line.

1. $-4, -1, 3, -7, 7$ **2.** $10, -2, -6, 1, 0$ **3.** $0, 5, -3, 9, -8$

4. $12, -12, -15, 20, 10$ **5.** $-6, -8, -4, 8, 4$ **6.** $-10, -5, -20, -18, -13$

Name the opposite of the number.

7. -9 **8.** 15 **9.** 28

10. -4 **11.** -17 **12.** 100

Order the integers from least to greatest.

13. $15, 25, -31, -22, 36, -46$ **14.** $-103, -105, -100, -110, -101$

15. $85, 60, 77, 100, 30, 55$ **16.** $66, -3, -10, 39, 51, -25$

17. $116, 106, -106, -110, 110$ **18.** $-79, -1110, -80, 85, 32$

Find the absolute value.

19. $|21|$ **20.** $|-11|$ **21.** $|34|$

22. $|-34|$ **23.** $|15|$ **24.** $|-4|$

25. $|-19|$ **26.** $|0|$ **27.** $|13|$

Complete the statement using $<$, $>$, or $=$.

28. 4 ___ $|-4|$ **29.** -7 ___ $|-7|$ **30.** $|-1|$ ___ 1

31. $|-18|$ ___ $|10|$ **32.** $|-16|$ ___ 0 **33.** $|-22|$ ___ $|-23|$

In Exercises 34–38, use the number line below.
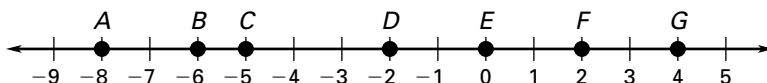
34. Which labeled point has an absolute value of 6?

35. Which labeled point is the same distance from 0 as -4?

36. Which labeled point is the opposite of 5?

37. Which labeled point is its own absolute value?

38. Name two labeled points that have the same absolute value.

Practice

For use with Lesson 5.2: Adding Integers

Complete the statement using the words *sometimes, always,* or *never.*

1. The sum of two negative numbers is _____ positive.

2. The sum of a positive number and a negative number is _____ negative.

3. The sum of a number and its opposite is _____ zero.

For Exercises 10–48, find each sum.

4. $-5 + (-5)$	**5.** $4 + 6$	**6.** $-5 + 3$
7. $7 + (-4)$	**8.** $-3 + 2$	**9.** $6 + (-7)$
10. $-43 + 51$	**11.** $17 + (-15)$	**12.** $-98 + 16$
13. $44 + (-61)$	**14.** $22 + 65$	**15.** $-19 + (-33)$
16. $-8 + (-6)$	**17.** $-26 + 13$	**18.** $111 + 33$
19. $88 + 12$	**20.** $50 + (-25)$	**21.** $-70 + (-8)$
22. $40 + (-29)$	**23.** $-12 + (-52)$	**24.** $-18 + 25$
25. $37 + (-19)$	**26.** $-29 + (-16)$	**27.** $71 + 54$
28. $-73 + 81$	**29.** $-10 + 42$	**30.** $28 + (-15)$
31. $-32 + 32$	**32.** $-40 + 88$	**33.** $95 + (-55)$
34. $18 + 87$	**35.** $-100 + 81$	**36.** $51 + 17$
37. $15 + (-9)$	**38.** $-21 + (-60)$	**39.** $76 + (-76)$
40. $-18 + 34$	**41.** $-31 + (-22)$	**42.** $75 + 29$

43. At 8 A.M., the temperature was $-5°$F. Over the next five hours, the temperature rose $16°$F. What was the temperature at 1 P.M.?

44. A football team lost 15 yards on one play. On the next play, they gained 8 yards. Find the total amount of yardage gained or lost on these two plays.

NAME _____ DATE _____

Practice

For use with Lesson 5.3: Subtracting Integers

Name the opposite of each number.

1. 35　　　　　　　　　**2.** -44　　　　　　　　**3.** 0

4. -18　　　　　　　**5.** 71　　　　　　　　　**6.** -5

Write each subtraction as an addition.

7. $1 - (-15)$　　　　　**8.** $51 - 16$　　　　　　**9.** $32 - (-19)$

10. $8 - 13$　　　　　　**11.** $12 - (-17)$　　　　**12.** $2 - 10$

For Exercises 13–48, find each difference.

13. $-11 - 8$　　　　　**14.** $-11 - (-8)$　　　**15.** $11 - 8$

16. $24 - 16$　　　　　**17.** $16 - 24$　　　　　**18.** $16 - (-24)$

19. $-8 - 22$　　　　　**20.** $31 - (-5)$　　　　**21.** $-13 - 4$

22. $-7 - 21$　　　　　**23.** $44 - (-21)$　　　**24.** $-11 - (-23)$

25. $-8 - (-26)$　　　**26.** $15 - (-15)$　　　**27.** $-50 - 12$

28. $-15 - 9$　　　　　**29.** $4 - 17$　　　　　**30.** $-16 - (-5)$

31. $-30 - (-24)$　　　**32.** $7 - 17$　　　　　**33.** $-14 - 27$

34. $55 - (-21)$　　　**35.** $-45 - (-15)$　　**36.** $19 - (-7)$

37. $-62 - 41$　　　　**38.** $37 - 42$　　　　　**39.** $3 - 19$

40. $21 - 43$　　　　　**41.** $-1 - (-17)$　　　**42.** $-88 - 20$

43. $22 - (-17)$　　　**44.** $31 - 18$　　　　　**45.** $-18 - (-28)$

46. $37 - (-11)$　　　**47.** $25 - 34$　　　　　**48.** $-20 - (-4)$

49. In describing elevations, you can use negative numbers to represent elevations below sea level and positive numbers to represent elevations above sea level. The highest elevation in Louisiana is Driskill Mountain at 535 ft. This is 543 ft higher than the elevation of New Orleans.

　　a. Find the elevation of New Orleans.

　　b. How much lower than New Orleans is Death Valley, California, the lowest elevation in the United States, with an elevation of -282 ft?

LESSON 5.4

Practice

For use with Lesson 5.4: Multiplying and Dividing Integers

For Exercises 1–45, find each product or quotient.

1. $12(-7)$ **2.** $64 \div (-4)$ **3.** $90 \div 5$

4. $-88 \div 11$ **5.** $(-24)(10)$ **6.** $98 \div (-7)$

7. $15(20)$ **8.** $30 \div 6$ **9.** $(-18)(-3)$

10. $-82 \div 2$ **11.** $-105 \div (-7)$ **12.** $400 \div (-20)$

13. $42(-3)$ **14.** $(-11)(-11)$ **15.** $-78 \div 6$

16. $26 \div (-2)$ **17.** $(-2)(52)$ **18.** $17(3)$

19. $22(-5)$ **20.** $75 \div (-3)$ **21.** $(-12)(-13)$

22. $(-8)(22)$ **23.** $(-21)(-4)$ **24.** $42 \div (-7)$

25. $-125 \div (-5)$ **26.** $(-5)(-16)$ **27.** $(-3)(33)$

28. $30(-9)$ **29.** $96 \div 2$ **30.** $-39 \div 13$

31. $96 \div (-24)$ **32.** $60(-9)$ **33.** $10(-13)$

34. $250 \div (-5)$ **35.** $68 \div (-4)$ **36.** $55 \div 5$

37. $(-25)(-40)$ **38.** $-48 \div 16$ **39.** $(-4)(-5)(-10)$

40. $96 \div (-4)$ **41.** $(-4)(-4)(-4)$ **42.** $-16 \div (-2)$

43. $(-32)(9)$ **44.** $2(-12)(-3)$ **45.** $56 \div (-7)$

46. A nurse checked a patient's temperature every hour for 3 h. Each time, the temperature had fallen 1°F. Express the change in the patient's temperature over that time period as an integer.

47. A football team lost 5 yd on each of three consecutive plays. Express the total yardage for the three plays as an integer.

48. Frank hopes to experience a weight change of -20 lb over the next 10 weeks. Use an integer to express the average weight change per week he hopes to achieve.

Algebra Pre-Assessment

Simplify.

1) $14 \div 7 + 3^2$

2) $42 \div 2(-12 + 9)$

3) $(-2)^3 - 5(1/2) + 63$

4) $|-14|$

5) $18 - 30 \div 5$

6) $48 \div (5 + 7) - 9$

7) $4^3 - 5(2) + 13$

Adding/Subtracting/Multiplying/Dividing Positive and Negative Numbers

8) $-2 + 11 - 7$

9) $5 - 3 + 12 - (-9)$

10) $(-2)(4)(-5)(-1)$

11) $-4 + -9 - 3(-6)$

Evaluating Expressions

12) $3(n - 1) + 2n$, when n = 5

13) $7b - 2a$, when a = -3 and b = 4

14) $3x^2 + 5x + 1$, when x = -2

15) $\dfrac{2r}{t} + 7$, when r = 12 and t = 3

16) $(3x)^2 - 7y^2$, when x = 3 and y = 2

17) $4(3d + 6) - 2d$, when d = -6

Combine like terms.

18) $4x + 5x =$

19) $p + 9q + 9 + 14p =$

20) $6b + 6b^2 + 4b^3 =$

1

Algebra Pre-Assessment

Solve each equation.

21) $n - 36 = 17$

22) $97 = t + 45$

23) $w + 19 = 62$

24) $7r = 84$

25) $97a = 194$

26) $495 = 11d$

27) $21 = d \div 2$

28) $150 = 3j$

29) $\dfrac{p}{15} = 6$

30) $\dfrac{x}{8} = \dfrac{4}{5}$

31) $\dfrac{-9}{m} = \dfrac{5}{6}$

Solve. Write each answer in simplest form.

32) $\dfrac{4}{5}t = \dfrac{1}{5}$

33) $\dfrac{4}{3}n = 3\dfrac{1}{5}$

34) $4\dfrac{6}{7} + p = 5\dfrac{1}{4}$

35) $-\dfrac{5}{36}x = -\dfrac{5}{16}$

Algebra Pre-Assessment

Simplify each expression by distributing and combining like terms.

36)   4x + 7y – 14x + 2y

37)   -13 – 4y – 5z + 15 – (-4z) + 11y

38) $20xy + 3x^2y – 10x^2y – 30xy$

39)   -3(2x – 5y)

40)   9(6 + 2y) – 5 + 2y

41)   2(3x – 1) + 3(x + 7)

42)   9(2x + 4) – 2(3x – 1)

43) List all the perfect squares between 1 and 250

44) What is the smallest prime number? The smallest composite number?

45) List 4 factors of 24. List 4 multiples of 24.

46) Are both 7 and –½ integers? Why or why not?

47) Are both 7 and –½ rational numbers? Why or why not?

48) Round 43.77301 to the nearest hundredth.

49) Round -5.1982569 to the nearest hundredth.

50) Round 2.773549 to the nearest thousandt