Homework Packet for Mrs. Duffey 8th Grade Math

Math 8 Mrs. Duffey	Chapter 3 Vocab	Skills Practice 3-1	Skills Practice 3-2	Skills Practice 3-3	Skills Practice 3-4	Skills Practice 3-5	Skills Practice 3-6	Skills Practice 3-7	Skills Practice 3-8

Total Points Received

Total Points Available

Student Name: _____

Hour: _____

To access the on-line textbook resources:

1. Go to http://prealg.com
2. Select Student/Parent Center.

3) Student-Built Glossary

This is an alphabetical list of key vocabulary terms you will learn in Chapter 3. As you study this chapter, complete each term's definition or description. Remember to add the page number where you found the term. Add these pages to your Pre-Algebra Study Notebook to review vocabulary at the end of the chapter.

Vocabulary Term	Found on Page	Definition/Description/Example
area		
arithmetic sequence		
coefficient koh-uh-FIHSH-ehnt		
common difference		
constant		
equivalent equations		
equivalent expressions		

3 Student-Built Glossary *(continued)*

Vocabulary Term	Found on Page	Definition/Description/Example
formula		
inverse operations		
like terms		
perimeter		
sequence		
simplest form		
simplifying an expression		
term		
two-step equation		

3-1 Skills Practice

The Distributive Property

Use the Distributive Property to write each expression as an equivalent expression. Then evaluate the expression.

1. $8(50 + 4)$ **2.** $(20 + 9)5$ **3.** $2(60 + 4)$ **4.** $7(40 - 2)$

5. $4(400 - 2)$ **6.** $-4(16 + 5)$ **7.** $-8(4 + 1)$ **8.** $9(24 - 19)$

9. $-3(7 - 11)$ **10.** $-10(12 - 4)$ **11.** $(21 + 9)(-5)$ **12.** $-7(1 - 10)$

13. $-2(1 - 6)$ **14.** $4(15 + 25)$ **15.** $15(100 + 6)$ **16.** $12(22 - 52)$

Use the Distributive Property to write each expression as an equivalent algebraic expression.

17. $4(d + 2)$ **18.** $1(u - 3)$ **19.** $-6(f + 5)$ **20.** $-2(g - 3)$

21. $3(x - 7)$ **22.** $8(-b + 4)$ **23.** $(9 - h)5$ **24.** $(c + 1)(-4)$

25. $-1(2 - y)$ **26.** $-7(a + 1)$ **27.** $11(k - 20)$ **28.** $-9(r - 1)$

29. $5(1 - b)$ **30.** $8(x + 12)$ **31.** $-6(p + 15)$ **32.** $4(h - 16)$

33. $-3(w - 10)$ **34.** $-10(c + 9)$ **35.** $2(11 - q)$ **36.** $-4(12 - f)$

37. $12(n + 2)$ **38.** $16(g + 1)$ **39.** $-8(9 + b)$ **40.** $-5(z - 4)$

41. $6(r - 20)$ **42.** $7(2 - j)$ **43.** $-1(m + 1)$ **44.** $-2(v - 8)$

45. $5(q - 16)$ **46.** $-10(c - 7)$ **47.** $-3(-x - 1)$ **48.** $(9 - h)(-2)$

3-2 Skills Practice

Simplifying Algebraic Expressions

Simplify each expression.

1. $7a + a$

2. $k - k$

3. $m + 3m + 8$

4. $10b - b + 1$

5. $9j + 8j - 7j$

6. $6y + 3y + 6y - 2y$

7. $3q + 2q - q$

8. $18 + 7x - 12 + 5x$

9. $12a + 3 + 18 - 9a$

10. $13c - 7 + c - d$

11. $5h + h - 4h + 1 - 2h$

12. $2(v - 5) + 7v + 4$

13. $5(r + 9) - 5$

14. $1 - 4(u - 1)$

15. $-7(w - 4) + 3w - 27$

16. $-8 - 7(y + 2)$

17. $-18(c - 1) - 18$

18. $12(n - 4) - 3n$

19. $5m - 9 + 4m$

20. $-7 + g + 1 - 6g$

21. $x - 9x + 3 + 8x - 3$

22. $6(r - 4) + r + 30 - 7r$

23. $-5 + 5a - 4 - 2a + 3a$

24. $21 - 8(v + 3) + 3 + 7v$

25. $4x - 9 + 3x + 6 - 9x - 4$

26. $p - 2 + 1 - p + 1 + 2p$

27. $-11f + 6 - f + 4 + 13f - 9$

28. $3(d - 4) + 2 - 2d + 1 - d$

29. $1 - s + 2 + 2s - 3s + 1$

30. $5 - 9k + 1 + k - 2(7 - k)$

31. $1 - g + 5 - 2g + 3(g - 2)$

32. $7h + 1 - h + 4 - 2 - 8h$

33. $-12 + 7(d - 1) + 14 - d$

Lesson 3-2

3-3 Skills Practice

Solving Equations by Adding or Subtracting

Solve each equation. Check your solution.

1. $r + 1 = -5$ **2.** $h + 8 = 6$ **3.** $t - 3 = -11$ **4.** $p - 5 = 9$

5. $w + 9 = -9$ **6.** $x - 9 = -9$ **7.** $a + 7 = -7$ **8.** $m + 9 = -7$

9. $q - 4 = 5$ **10.** $b + 2 = 3$ **11.** $n - 11 = 1$ **12.** $r - 1 = -3$

13. $c + 6 = 1$ **14.** $v - 3 = -7$ **15.** $z + 3 = 0$ **16.** $s - 8 = -1$

17. $y - 7 = -5$ **18.** $u - 10 = -2$ **19.** $g + 1 = 10$ **20.** $k + 4 = -9$

21. $w + 12 = -4$ **22.** $z - 8 = -8$ **23.** $d - 11 = 1$ **24.** $h + 3 = 10$

25. $r + 10 = -6$ **26.** $y + 1 = 4$ **27.** $f - 6 = 6$ **28.** $d - 2 = -8$

29. $j + 11 = 4$ **30.** $m - 10 = 4$ **31.** $q + 3 = -5$ **32.** $g - 4 = 0$

33. $a - 12 = -19$ **34.** $c + 5 = 2$ **35.** $h - 9 = 12$ **36.** $p + 14 = -1$

37. $v + 13 = -11$ **38.** $x + 8 = -1$ **39.** $y + 12 = -10$ **40.** $k - 16 = 7$

41. $d - 15 = -14$ **42.** $g - 12 = 10$ **43.** $b + 13 = -20$ **44.** $f - 15 = -1$

45. $q + 8 = 13$ **46.** $w - 4 = -15$ **47.** $r + 10 = -13$ **48.** $t - 11 = 11$

49. $j - 9 = -8$ **50.** $k + 2 = -15$ **51.** $n + 12 = 0$ **52.** $y + 9 = 14$

Lesson 3-3

3-4 Skills Practice

Solving Equations by Multiplying or Dividing

Solve each equation. Check your solution.

1. $3x = 24$

2. $\dfrac{m}{-5} = -15$

3. $-4f = 16$

4. $\dfrac{u}{2} = 12$

5. $-6a = 6$

6. $\dfrac{s}{-1} = 10$

7. $-2y = -2$

8. $-7z = 7$

9. $\dfrac{n}{8} = -24$

10. $-4r = -12$

11. $-9h = 81$

12. $\dfrac{c}{-10} = 1$

13. $\dfrac{v}{-15} = -15$

14. $\dfrac{m}{12} = 0$

15. $-12g = 12$

16. $\dfrac{w}{-4} = 0$

17. $-1f = 11$

18. $\dfrac{r}{-1} = 22$

19. $8d = -16$

20. $\dfrac{r}{15} = 45$

21. $25k = -200$

22. $-3p = 18$

23. $7j = -63$

24. $\dfrac{y}{-10} = 10$

25. $\dfrac{x}{-8} = -1$

26. $5g = -20$

27. $\dfrac{p}{6} = 0$

28. $7y = 7$

29. $-6q = -30$

30. $-12c = -60$

31. $-9b = 90$

32. $-4k = -120$

33. $2r = 0$

34. $-1t = 19$

35. $\dfrac{n}{-12} = 12$

36. $-15j = 120$

37. $\dfrac{u}{-11} = 11$

38. $5c = 85$

39. $-9q = -36$

40. $9z = -144$

Lesson 3-4

3-5 Skills Practice

Solving Two-Step Equations

Solve each equation. Check your solution.

1. $3x + 10 = 1$

2. $\dfrac{a}{5} + 8 = 9$

3. $8w - 12 = -4$

4. $\dfrac{r}{2} + 6 = 5$

5. $18 - 2q = 4$

6. $3j - 20 = 16$

7. $\dfrac{u}{12} - 8 = -8$

8. $7p + 11 = -31$

9. $12d + 15 = 3$

10. $4c + 20 = 0$

11. $\dfrac{n}{2} - 9 = -5$

12. $10b - 19 = 11$

13. $2h + 10 = -12$

14. $6k - 9 = 15$

15. $\dfrac{w}{-5} - 4 = -2$

16. $12 - 7y = -2$

17. $11 - 3g = 32$

18. $12s + 13 = 25$

19. $2z - 4 - z = 4$

20. $10 - 5h + 2 = 32$

21. $\dfrac{r}{-7} - 5 = -6$

22. $-4a + 5 - 2a - 9 = 44$

23. $\dfrac{w}{-3} + 6 - 1 = 2$

24. $7k - 8k = 1$

25. $7f - 24 = 25$

26. $6 - \dfrac{m}{6} - 8 = 0$

27. $10 - d = 19$

28. $9x + 5 - 4x = -20$

29. $3 - 4t + 11 = 2$

30. $\dfrac{a}{3} - 4 + 9 = 7$

31. $6q - 4 = -16$

32. $\dfrac{m}{8} - 12 - 3 = -12$

33. $5b + 6 - 6b + 2 = 19$

Lesson 3-5

3-6 Skills Practice

Writing Two-Step Equations

Translate each sentence into an equation. Then find each number.

1. Eleven less than 5 times a number is 24.

2. The quotient of a number and -9 increased by 10 is 11.

3. Five less than the product of -3 and a number is -2.

4. Fifteen more than twice a number is -23.

5. The difference between 5 times a number and 4 is 16.

6. Nine more than -8 times a number is -7.

7. The difference between 12 and ten times a number is -28.

8. Seven more than three times a number is 52.

9. Eleven less than five times a number is 19.

10. Thirteen more than four times a number is -91.

11. Seven less than twice a number is 43.

Solve each problem by writing and solving an equation.

12. SHOPPING The total cost of a suit and 4 ties is $292. The suit cost $200. Each tie cost the same amount. Find the cost of one tie.

13. AGES Mary's sister is 7 years older than Mary. Their combined ages add up to 35. How old is Mary?

3-7 Skills Practice

Sequences and Equations

Describe each sequence using words and symbols.

1. 7, 8, 9, 10, ...

2. 5, 6, 7, 8, ...

3. 7, 14, 21, 28, ...

4. 12, 24, 36, 48, ...

5. 3, 5, 7, 9, ...

6. 12, 21, 30, 39, ...

7. 55, 62, 69, 76, ...

8. 3, 21, 39, 57, ...

Write an equation that describes each sequence. Then find the indicated term.

9. 5, 8, 11, 14, ...; 9th term

10. 7, 16, 25, 34, ...; 15th term

11. 7, 9, 11, 13, ...; 18th term

12. 4, 10, 16, 22, ...; 10th term

13. 6, 17, 28, 39, ...; 8th term

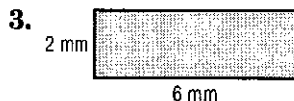**14.** 25, 44, 53, 62, ...; 12th term

15. 26, 29, 32, 35, ...; 14th term

16. 61, 83, 105, 127, ...; 20th term

3-8 Skills Practice

Using Formulas

1. **AIR TRAVEL** A plane is traveling 9 miles per minute. How much time is needed to travel 216 miles?

2. **JOGGING** What is the rate, in feet per second, of a girl who jogs 315 feet in 45 seconds?

Find the perimeter and area of each rectangle.

3.
2 mm
6 mm

4.
5 ft
4 ft

5.
45 m
75 m

6.
84 mi
126 mi
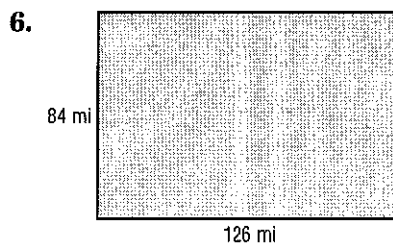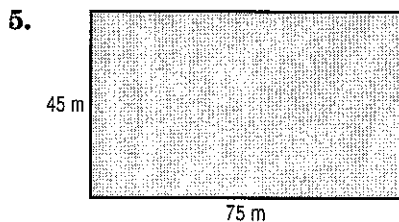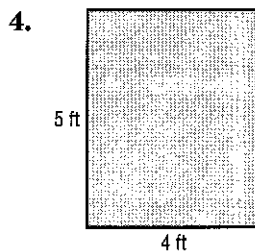
7. a rectangle that is 21 inches long and 13 inches wide

8. a square that is 25 centimeters on each side

Find the missing dimension of each rectangle.

9.
20 in.
Perimeter = 208 in.

10.
Area = 210 m²
10 m

11.
625 mi
Perimeter = 2402 mi

12.
8 ft
Area = 216 ft²
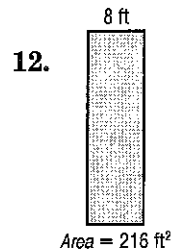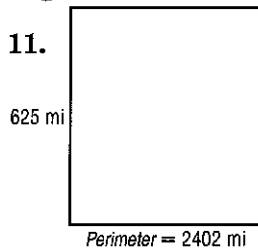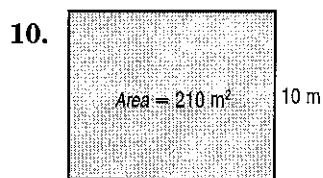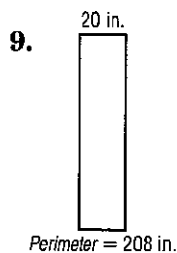
13. The perimeter of a rectangle is 100 centimeters. Its width is 9 centimeters. Find its length.

14. The area of a rectangle is 319 square kilometers. Its width is 11 kilometers. Find its length.