

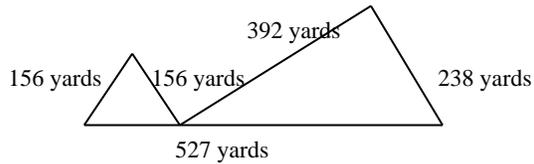
PreAlgebra

Final Exam/Midterm review worksheet

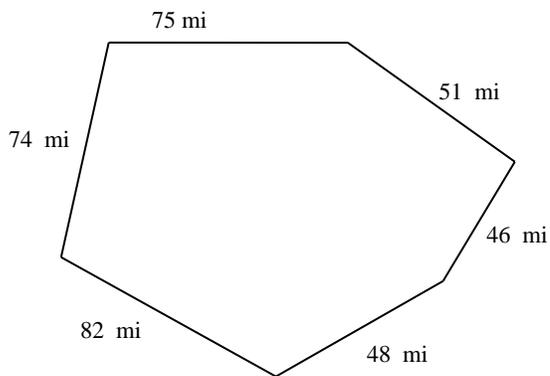
Problem numbers 1-19, 23-55, 59-62, 71-72, 78-79, 82-84, 105-108, 117 – 118, 123 – 126, and 136 - 138 are review concepts that may be covered on the midterm exam.

Find the perimeter.

1.

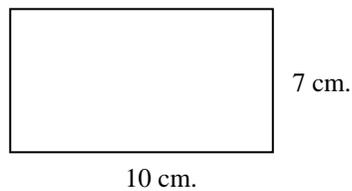


2.

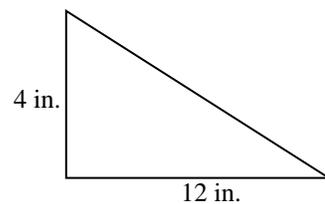


Find the area.

3. $A = LW$



4. $A = \frac{1}{2}bh$



Write in words.

5. 8,354,125

Write as a number.

6. Fifty-eight million, seven hundred thirty-two and sixteen hundredths

Find the place value of the 2 in the following numbers.

7. 269,571

8. 793,801,524

Round as indicated.

9. 636,331 to the nearest ten.

10. 504 to the nearest hundred.

Write a multiplication sentence that corresponds to the situation.

11. How many months are there in 45 years?

12. Julie can bike 56 miles a day. If she can vacation for 22 days, what is the maximum distance she can cover?

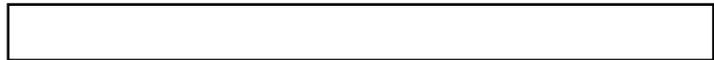
Write division sentence that corresponds to the situation. Do not carry out the division.

13. A group of 7 people wants to buy a boat. The boat costs \$273. If they all pay the same amount, how much is each person's share?

14. The city bridge has 9 lanes, all carrying equal number of cars. If 297 cars drive across the bridge, how many cars cross in each lane?

Complete the following fractional representation problems.

15. Shade in $\frac{3}{4}$ of the rectangle.



Use the following word problem to answer questions 16 – 19.

An art dealer is taking inventory. His shop contains a total of 37 pieces, which consist of sculptures, watercolor paintings, and oil paintings. If there are 15 watercolor paintings and 17 oil paintings, answer the following questions.

16. What fraction of the inventory are watercolor paintings?

17. What fraction of the inventory are oil paintings?

18. How many sculptures are there?

19. What fraction of the inventory are sculptures?

Translate to an algebraic expression. The choice of variables you use may vary.

20. 5 times the difference of two numbers.

21. 20 less than 4 times a number

22. a number decreased by 16

Write the following in exponential form.

23. $2 \cdot 2 \cdot 2 \cdot 3 \cdot 3 \cdot 5$

24. $2 \cdot 2 \cdot 3 \cdot 5 \cdot 5 \cdot 7$

Find the prime factorization of the number.

25. 70

26. 126

Simplify.

27. $(-30) \div (5) + 3(4) - 8(-2)$

29. $|98|$

31. $-91 + 97$

33. $24 - (-9)$

35. $(-5)(-5)(-3)$

37. $-84 \div (-6)$

39. $7(x-1) - 2x$

41. $3r - 5r + 8 + r$

43. $3x - 4(x + 2) + 1$

45. $2 - |-7|$

47. $7 - 2(6 - 1)$

49. $\frac{189z}{216z}$

28. $7(5) - 2(4) + (-42) \div (-7)$

30. $|-78|$

32. $-2 + (-6)$

34. $-11 - (-18)$

36. $7 \cdot (-10) \cdot (-10) \cdot 6 \cdot (-3)$

38. $\frac{80}{-5}$

40. $8(x+2) + 9 + 3x$

42. $-(12b - 10) + 5(3b - 2)$

44. $-|-56|$

46. $-42 \div 3 \cdot 2$

48. $3 + 10 \cdot 2$

Multiply.

50. $2 \cdot \frac{1}{5}$

51. $-\frac{5}{6} \cdot 7$

52. $\frac{7}{8} \cdot \frac{7}{8} \cdot \frac{1}{2}$

53. $\frac{5}{8} \cdot \frac{5}{12} \cdot \frac{4}{25}$

Write the fraction in its lowest terms.

54. $\frac{55}{190}$

55. $\frac{23}{69}$

Write the following as a fraction in lowest terms.

56. 0.40

57. 8.75%

58. $22\frac{3}{8}\%$

Solve.

59. A restaurant has a capacity of 32 patrons. If the restaurant is $\frac{7}{8}$ full, how many patrons are at the restaurant?

60. A recipe calls for $\frac{2}{3}$ cup of milk. How much milk should be used to make $\frac{1}{4}$ of the recipe?

61. Find the quotient of 6 and -2 .

62. Subtract 12 from -36 .

63. Convert 129 inches to feet. Write your answer as a decimal.

64. 1 yard 2 feet = _____ inches

65. 16 yard 2 feet \div 5 = _____ yds _____ ft

66. 0.2m = _____ mm

67. $9.6\text{m} \div 5 =$ _____ m

68. $30\text{cm} + 8.9\text{m} =$ _____ m or _____ cm

69. Convert 53mm to meters.

70. How many centimeters are in 0.2km?

Divide and simplify.

71. $\frac{3}{4} \div \frac{6}{7}$

72. $\frac{4}{9} \div \frac{6}{5}$

Add and, if possible, simplify.

73. $\frac{-2}{5} + \frac{1}{15}$

74. $\frac{13}{-14} + \frac{8}{21} - \frac{5}{7}$

75. $\frac{2}{3} + \frac{5}{6} + \frac{-2}{9}$

Use < or > to write a true sentence.

76. $\frac{1}{12} \square \frac{5}{6}$

77. $-\frac{11}{8} \square -\frac{46}{40}$

78. $|-17| \square |-4|$

79. $|12| \square |-20|$

Solve.

80. $y + \frac{5}{6} = \frac{13}{14}$

81. $m - \frac{4}{5} = \frac{6}{7}$

82. $3r + 2 = 29$

83. $20 = 5x - 10$

84. $\frac{3}{4}x = 18$

85. $6 - \frac{2}{9}x = -4$

86. While walking Joe's heart beats 4790 times in 50 minutes. What is the rate in beats per minute?

87. Two packets of pudding contain 13 servings. What is the rate in servings per packet?

Round the number as requested.

88. Round to the nearest tenth: 1.23

89. Round to the nearest hundredth: 1.274

Combine like terms.

90. $-10.2b + 25.8b$

91. $8.6a + 8.3b - 1.3a - 3.5b$

Evaluate.

92. $P + Prt$, for $P = 5000$, $r = 0.06$ and $t = 5.5$

93. $2na + .5n(n-1)d$ for $n = 6$, $a = 3.5$ and $d = 9$

Write the fraction in decimal notation.

94. $\frac{11}{16}$

95. $\frac{15}{40}$

Estimate by rounding as directed.

96. $15.9745 + 74.5890$; nearest tenth

97. $32.432 - 14.18$; nearest tenth

Solve.

98. Mr. Lee wanted to keep track of how far he was driving today. He drove to Lodi which was 35.15 miles, then he drove to Merced which was 10.11 miles, then he drove home which was 18.03 miles. How far did Mr. Lee drive?

99. Mrs. Hernandez prepared her grocery list at home. Her list contained the following items with their sale prices: cheese - \$3.97; crackers - \$2.87; soda - \$3.01; hamburger - \$2.97; and gum - \$0.97. She bought all of the items at the store except the crackers. How much money did she spend?

100. 150% of 30 is what?

101. \$39 is what percent of \$50

102. 56.32 is 64% of what?

Write the decimal as a fraction in lowest terms.

103. -39.08

104. 0.0108

Simplify.

105. $8 \div 2 \cdot 2 - 3^2$

106. $-7(4^2) \div 4$

107. $\frac{6(-3) + 2(-3)}{24 - 28}$

108. $\frac{3^2 + (7 \cdot 2) - 3}{2^2 - (6)(-2) - 12}$

109. $14\frac{5}{8} + 13\frac{1}{4}$

110. $7\frac{3}{4} + 5\frac{5}{6}$

111. $34\frac{1}{3} - 12\frac{5}{8}$

112. $23\frac{5}{16} - 16\frac{3}{4}$

113. $\left(3\frac{1}{2}\right)\left(4\frac{2}{3}\right)$

114. $4\frac{7}{10} \cdot 5\frac{3}{10}$

115. $20 \div 2\frac{3}{5}$

116. $5\frac{4}{5} \div 2\frac{1}{2}$

117. $-5(x - 7) + 10$

118. $-4(x + 2) - 7$

Find the LCD.

119. $\frac{2}{3}, \frac{4}{5}, \frac{2}{7}$

121. $\frac{8}{19}, \frac{-15}{76}$

120. $\frac{1}{6}, \frac{7}{x}, \frac{7}{18}$

122. $\frac{-17}{132}, \frac{61}{165}$

Evaluate.

123. $a + (b - a)^2$ for $a = 6$ and $b = 4$.

125. $-x$ for $x = -95$

124. $(x + y)^2 - y$ for $x = 2$ and $y = 3$

126. $-(-(-x))$ for $x = 27$

127. Find the rate, or speed, as a ratio of distance to time.

341.25 m, 1.75 hr

128 – 135 (each line) Fill in the missing values.

Fraction notation	Decimal notation	Percent notation
		87.5%
$\frac{5}{6}$		
$\frac{1}{2}$		
	2.8	

Identify the property being illustrated.

136. $(-12) + 15 = 15 + (-12)$

138. $14 + (x + 3) = (x + 3) + 14$

137. $8 \cdot (3 \cdot 4) = (8 \cdot 3) \cdot 4$

Pre Algebra Final Review Solutions

- | | |
|---|----------------------|
| 1. 1469 yards | 28. 33 |
| 2. 376 miles | 29. 98 |
| 3. 70 cm^2 | 30. 78 |
| 4. 24 in^2 | 31. 6 |
| 5. Eight million, three hundred fifty-four thousand, one hundred twenty-five | 32. -8 |
| 6. 58,000,732.16 | 33. 33 |
| 7. Hundred thousand | 34. 7 |
| 8. Tens | 35. -75 |
| 9. 636,330 | 36. $-12,600$ |
| 10. 500 | 37. 14 |
| 11. $45 \times 12 = 540$ months | 38. -16 |
| 12. $56 \times 22 = 1232$ miles | 39. $5x - 7$ |
| 13. $273 \div 7$ | 40. $11x + 25$ |
| 14. $297 \div 9$ | 41. $-r + 8$ |
| 15.  | 42. $3b$ |
| 16. $\frac{15}{37}$ | 43. $-x - 7$ |
| 17. $\frac{17}{37}$ | 44. -56 |
| 18. 5 | 45. -5 |
| 19. $\frac{5}{37}$ | 46. -28 |
| 20. $5(x - y)$ | 47. -3 |
| 21. $4x - 20$ | 48. 23 |
| 22. $x - 16$ | 49. $\frac{7}{8}$ |
| 23. $2^3 \cdot 3^2 \cdot 5$ | 50. $\frac{2}{5}$ |
| 24. $2^2 \cdot 3 \cdot 5^2 \cdot 7$ | 51. $-\frac{35}{6}$ |
| 25. $2 \cdot 5 \cdot 7$ | 52. $\frac{49}{128}$ |
| 26. $2 \cdot 3^2 \cdot 7$ | 53. $\frac{1}{24}$ |
| 27. 22 | |

54. $\frac{11}{38}$

55. $\frac{1}{3}$

56. $\frac{2}{5}$

57. $\frac{7}{80}$

58. $\frac{179}{800}$

59. 28 patrons

60. $\frac{1}{6}$ cup

61. -3

62. -48

63. 10.75 feet

64. 60 inches

65. 83 yards 1 foot

66. 200 millimeters

67. 1.92 meters

68. 9.20 meters / 920 centimeters

69. 0.053 meters

70. 20,000 centimeters

71. $\frac{7}{8}$

72. $\frac{10}{27}$

73. $-\frac{1}{3}$

74. $-\frac{53}{42}$

75. $\frac{23}{18}$

76. <

77. <

78. >

79. <

80. $y = \frac{2}{21}$

81. $m = \frac{58}{35}$

82. $r = 9$

83. $x = 6$

84. $x = 24$

85. $x = 45$

86. 95.8 beats/min.

87. 6.5 servings/packet

88. 1.2

89. 1.27

90. $15.6b$

91. $7.3a + 4.8b$

92. 6650

93. 177

94. 0.6875

95. 0.375

96. 90.6

97. 18.2

98. 63.29 miles

99. \$10.92

100. 45

101. 78%

102. 88

103. $-\frac{977}{25}$

104. $\frac{27}{2500}$

105. -1

106. -28

107. 6

108. 5

109. $27\frac{7}{8}$

110. $13\frac{7}{12}$

111. $21\frac{17}{24}$

112. $6\frac{9}{16}$

113. $16\frac{1}{3}$

114. $24\frac{91}{100}$

115. $7\frac{9}{13}$

116. $2\frac{8}{25}$

117. $-5x + 45$

118. $-4x - 15$

119. 105

120. $18x$

121. 76

122. 660

123. 10

124. 22

125. 95

126. -27

127. 195 m/hr

128. Fraction $\frac{7}{8}$

129. Decimal $.875$

130. Decimal $0.\overline{83}$

131. Percent $83.\overline{3}\%$

132. Decimal $.5$

133. Percent 50%

134. Fraction $\frac{14}{5}$

135. Percent 280%

136. Commutative

137. Associative

138. Commutative