Math 8 Midterm Review Package

Windermere 2020

Name _____   Date _____

Perform the indicated operation(s).

1. $7 + (-2)$

2. $-4 + 8$

3. $4 + (-9)$

4. $-7 + 14$

5. $(-7) + (-6)$

6. $-8 + 2$

7. $20 - 13$

8. $103 - 87$

9. $3 - 8$

10. $19 - 31$

11. $112 - 164$

12. $0 - (-7)$

13. $-5 + 11 + 9$

14. $(-3) + 14 + (-7)$

15. $(-23) + (-6) + (-17)$

16. $(-7) + 5 + (-13) + 25$

17. $14 - 21 + 16 - 29$

18. $4 + (-5) + (-1) + 2$

Multiply.

19. $13(5)$

20. $6 \cdot 55$

21. $(-5)(10)$

22. $-33 \cdot 6$

23. $(-14)(-6)$

24. $(-13)(0)$

25. $(-11)(-11)$

26. $(3)(-5)(2)$

27. $(-10)(-8)(2)$

28. $-9 \cdot 8 \cdot 4$

29. $(2)(-9)(-5)(-3)$

30. $(-4)(6)(-5)(-6)$

Divide.

31. $\dfrac{-36}{4}$

32. $\dfrac{434}{-14}$

33. $-48 \div (-6)$

34. $-165 \div (-5)$

35. $-84 \div 3$

36. $\dfrac{-16}{0}$

37. $\dfrac{26}{-1}$

38. $\dfrac{-12}{-1}$

39. $\dfrac{-39}{-39}$

Perform the indicated operation(s).

40. $-3 + 5 \cdot (-2)$

41. $5 + 3(7 - 4)$

42. $3(8 - 6) + 42 \div 7$

43. $-4\left[2(5 - 8)^3 + 5 \cdot 2 \cdot 6\right]$

44. $3^2 \cdot \left[5 + (2 - 4)^2\right] - 15$

45. $\left[16 \div (1 + 3)^2 - 8 \div (-4)\right] + 12$

Solve.

46. While driving on the highway, Scott passes a sign that reads "Farmland 384 kilometers". Two hours later, he passes another sign that reads "Farmland 196 kilometers". Find Scott's average speed in kilometers per hour for those 2 hours.

47. Jason put $150 in his savings account when he opened it. A week later, he deposited $59. A month later, he withdrew $38. How much is in his account now?

48. John bought a bicycle for $178 and a helmet for $38. A week later, his brother Jack bought the same bicycle for $156 and the same helmet for $33. How much more did John pay than Jack?

49. Rachel works at a bakery 4 hours a day, 6 days a week. She earns $7.00 an hour. How much does she earn each week?

50. Bananas are 3 pounds for 99¢. How much does it cost for 2 pounds of bananas?

51. Angie is buying wallpaper. She wants to cover 4 walls, each of which has an area of 79 square feet. Each roll of wallpaper covers 20 square feet. How many rolls of paper does she need?

Write each fraction in lowest terms.

52. $\frac{10}{50}$

53. $\frac{5}{25}$

54. $\frac{7}{28}$

55. $\frac{3}{12}$

56. $\frac{18}{72}$

57. $\frac{7}{14}$

Write each improper fraction as a mixed number in lowest terms.

58. $\frac{12}{5}$

59. $\frac{37}{11}$

60. $\frac{24}{9}$

61. $\frac{39}{15}$

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

63. $\frac{120}{64}$

Write each mixed number as an improper fraction.

64. $5\frac{1}{2}$

65. $3\frac{1}{5}$

66. $1\frac{1}{10}$

67. $4\frac{5}{7}$

68. $3\frac{6}{7}$

69. $11\frac{4}{5}$

Add.

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

71. $\frac{5}{12} + \frac{1}{12}$

72. $\frac{37}{50} + \frac{3}{50}$

73. $2\frac{3}{5} + 1\frac{1}{5}$

74. $3\frac{5}{7} + 2\frac{6}{7}$

75. $3\frac{4}{13} + 2\frac{2}{13} + 3\frac{1}{13}$

76. $\frac{1}{2} + \frac{1}{4}$

77. $\frac{2}{3} + \frac{1}{7}$

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

Subtract.

79. $\frac{4}{9} - \frac{1}{9}$

80. $\frac{4}{9} - \frac{1}{9}$

81. $\frac{5}{14} - \frac{1}{14}$

82. $2\frac{3}{5} - 2\frac{1}{5}$

83. $3\frac{6}{11} - 2\frac{1}{11}$

84. $7\frac{6}{11} - 5\frac{8}{11}$

85. $\frac{1}{2} - \frac{1}{9}$

86. $\frac{6}{7} - \frac{3}{8}$

87. $\frac{2}{3} - \frac{3}{7}$

Simplify.

88. $7\frac{3}{4} + 8\frac{1}{7}$

89. $2\frac{2}{3} - 2\frac{1}{5}$

90. $3\frac{7}{12} - 2\frac{7}{8}$

Multiply.

91. $\frac{1}{5} \times \frac{1}{9}$

92. $\frac{2}{3} \cdot \frac{2}{5}$

93. $\frac{2}{3} \times \frac{3}{2}$

94. $\frac{2}{5} \cdot \frac{7}{2}$

95. $\frac{9}{10} \cdot \frac{5}{3}$

96. $\frac{16}{35} \cdot \frac{21}{30}$

97. $5 \times \frac{3}{4}$

98. $4\frac{1}{2} \cdot \frac{4}{5}$

99. $3\frac{2}{3} \cdot 2\frac{1}{4}$

Divide.

100. $\frac{1}{2} \div \frac{1}{2}$

101. $\frac{2}{3} \div \frac{3}{4}$

102. $\frac{12}{35} \div \frac{9}{10}$

103. $\frac{3}{10} \div 9$

104. $7 \div \frac{2}{3}$

105. $2\frac{4}{5} \div \frac{16}{25}$

106. $1\frac{3}{8} \div 2\frac{1}{5}$

107. $\dfrac{\frac{7}{4}}{\frac{7}{4}}$

108. $\dfrac{\frac{9}{20}}{\frac{27}{10}}$

Solve.

109. Elizabeth bicycled $12\frac{1}{2}$ miles on Monday, $20\frac{3}{4}$ miles on Tuesday and $16\frac{5}{8}$ miles on Friday. How far did she bicycle in all?

110. Carlos' goal is to study 5 hours for his math exam. Yesterday he studied for $2\frac{1}{4}$ hours. How many more hours does he need to study?

111. There are 450 students in seventh grade. Four-ninths of the students are boys. How many are boys?

112. Mr. Tennison bought $18\frac{3}{4}$ meters of wood at the lumber yard. The wood was $4.00 a meter. How much did he pay for the wood in all?

113. Of the 536 students in ninth grade, 272 are boys. What fraction of the students are boys?

114. The baseball team had a goal of selling 580 magazine subscriptions. They only sold $\frac{3}{4}$ of their goal. How many magazine subscriptions did they sell?

Write each ratio in simplest form.

115. 2 dollars to 20 dollars

116. 35 days to 21 days

117. 50 cents to 1 dollar

118. $\dfrac{27}{36}$

119. $\dfrac{36}{16}$

120. $\dfrac{180}{72}$

121. $6 : 14$

122. $85 : 100$

123. $35 : 56$

Is the proportion true or false?

124. $\dfrac{2}{5} = \dfrac{4}{10}$

125. $\dfrac{2}{3} = \dfrac{9}{4}$

126. $\dfrac{4}{8} = \dfrac{10}{20}$

Solve each proportion.

127. $\dfrac{6}{21} = \dfrac{x}{7}$

128. $\dfrac{1}{5} = \dfrac{3}{n}$

129. $\dfrac{9}{n} = \dfrac{81}{90}$

130. What is the unit price of $5\,\text{kg}$ of apples for $2.59?

131. Find the unit price of 2 tubes of toothpaste that sell for $3.29.

132. What is the unit price of 12 ounces of spaghetti for $0.89?

133. Which is a better buy, 3 pounds of potatoes for $1.79, or 10 pounds of potatoes for $6.00?

134. A dozen (12) cookies costs $2.88. Single cookies cost $0.25. Which is a better buy?

135. Two kilograms of ground beef costs $5.75. Five kilograms of ground beef costs $14.00. Which is a better buy?

136. How many grams are 4 pounds if 1 pound is 454 grams?

137. How many cups are in a 500 milliliter container if the ratio of milliliters to cups is 240 to 1?

138. The sides of a triangle are in the ratio $2 : 3 : 5$. The perimeter is 50 inches. Find the length of each side.

Fill in the table(s).

139.

fraction	decimal	percent
$\frac{7}{10}$		

140.

fraction	decimal	percent
$\frac{1}{5}$		
		40%
	0.8	

141.

fraction	decimal	percent
$\frac{9}{8}$		
	2.35	
		222%

142. Find 75% of 48.

143. Find 18% of 44.

144. Find 27.5% of 88.

145. Find $33\frac{1}{3}$% of 96.

146. What is 125% of 34?

147. What is $66\frac{2}{3}$% of 126?

148. 56 is what percent of 100?

149. 43.6 is what percent of 436?

150. 3.5 is what percent of 5?

151. What percent of 60 is 24?

152. What percent of 15 is 9?

153. What percent of 24 is 16?

154. 25% of what number is 27?

155. 75% of what number is 42?

156. 50% of what number is 12?

Fill in the table(s).

157. item: watch

regular price	$24.99
% discount	20%
sale price	

158. item: bicycle

regular price	$175.00
% discount	
sale price	$148.75

159. item: step ladder

regular price	
% discount	25%
sale price	$22.25

160. Carmen bought a tape player for $65. The sales tax was 6%. What was the total she paid for the tape player?

161. At Washington High School, 42% of all the students play at least one sport. If there are 1,500 students, how many play at least one sport?

162. Regina got 48 of the 60 items on a test correct. What percent of the questions did she answer correctly?

163. Sam answered 88% of the questions on a test correctly. If there were 50 items on the test, how many did he answer correctly?

164. Knew Books has 2,144 different fiction titles for sale. This is 32% of the titles that they carry. How many different titles do they carry?

165. Mr. Roberts earns a commission of 3% on any sale he makes. Last week, he sold a total of $3,486 in merchandise. What was his commission?

Answer List

1. 5	2. 4	3. -5
4. 7	5. -13	6. -6
7. 7	8. 16	9. -5
10. -12	11. -52	12. 7
13. 25	14. 4	15. -46
16. 10	17. -20	18. 0
19. 65	20. 330	21. -50
22. -198	23. 84	24. 0
25. 121	26. -30	27. 160
28. -288	29. -270	30. -720
31. -9	32. -31	33. 8
34. 33	35. -28	36. undef.
37. -26	38. 12	39. 1
40. -13	41. 14	42. 12
43. -24	44. 66	45. 15
46. 94 kph	47. \$171	48. \$27
49. \$168	50. 66¢	51. 16 rolls
52. $\frac{1}{5}$	53. $\frac{1}{5}$	54. $\frac{1}{4}$
55. $\frac{1}{4}$	56. $\frac{1}{4}$	57. $\frac{1}{2}$
58. $2\frac{2}{5}$	59. $3\frac{4}{11}$	60. $2\frac{2}{3}$
61. $2\frac{3}{5}$	62. 2	63. $1\frac{7}{8}$
64. $\frac{11}{2}$	65. $\frac{16}{5}$	66. $\frac{11}{10}$
67. $\frac{33}{7}$	68. $\frac{27}{7}$	69. $\frac{59}{5}$
70. $\frac{4}{5}$	71. $\frac{1}{2}$	72. $\frac{4}{5}$
73. $3\frac{4}{5}$	74. $6\frac{4}{7}$	75. $8\frac{7}{13}$
76. $\frac{3}{4}$	77. $\frac{17}{21}$	78. $\frac{47}{30}$
79. $\frac{1}{3}$	80. $\frac{1}{3}$	81. $\frac{2}{7}$
82. $\frac{2}{5}$	83. $1\frac{5}{11}$	84. $1\frac{9}{11}$
85. $\frac{7}{18}$	86. $\frac{27}{56}$	87. $\frac{5}{21}$
88. $15\frac{25}{28}$	89. $\frac{7}{15}$	90. $\frac{17}{24}$
91. $\frac{1}{45}$	92. $\frac{4}{15}$	93. 1
94. $\frac{7}{5}$	95. $\frac{3}{2}$	96. $\frac{8}{25}$
97. $\frac{15}{4}$	98. $\frac{18}{5}$	99. $\frac{33}{4}$
100. 1	101. $\frac{8}{9}$	102. $\frac{8}{21}$
103. $\frac{1}{30}$	104. $10\frac{1}{2}$	105. $4\frac{3}{8}$

106. $\frac{5}{8}$ 107. 1 108. $\frac{1}{6}$

109. $49\frac{7}{8}$ mi 110. $2\frac{3}{4}$ 111. 200 boys

112. \$75 113. $\frac{34}{67}$ 114. 435 subscriptions

115. $1:10$ 116. $5:3$ 117. $1:2$

118. $\frac{3}{4}$ 119. $\frac{9}{4}$ 120. $\frac{5}{2}$

121. $3:7$ 122. $17:20$ 123. $5:8$

124. true 125. false 126. true

127. 2 128. 15 129. 10

130. $\approx$ \$0.52 per kilogram 131. $\approx$ \$1.65 per tube 132. $\approx$ \$0.07 per ounce

133. 3 pounds for \$1.79 134. \$2.88 per dozen 135. 5 kilograms for \$14.00

136. 1816 g 137. ≈ 2.08 c 138. 10 in, 15 in, 25 in

139. 0.7, 70% 140. 0.2, 20%; $\frac{2}{5}$, 0.4; $\frac{4}{5}$, 80% 141. 1.125, 112.5%; $\frac{47}{20}$, 235%; $\frac{111}{50}$, 2.22

142. 36 143. 7.92 144. 24.2

145. 32 146. 42.5 147. 84

148. 56% 149. 10% 150. 70%

151. 40% 152. 60% 153. $66\frac{2}{3}$%

154. 108 155. 56 156. 24

157. \$19.99 158. 15% 159. \$29.66 (rounded)

160. \$68.90 161. 630 students 162. 80%

163. 44 questions 164. 6,700 titles 165. \$104.58

Catalog List