Name _____ **Date** _____

PMI – 4th Grade **Fraction Computation**

Adding Fractions with Common Denominators

Classwork

Solve the following problems. Simplify to lowest terms:

1) $\frac{1}{2} + \frac{1}{2}$

2) $\frac{1}{3} + \frac{2}{3}$

3) $\frac{1}{4} + \frac{2}{4}$

4) $\frac{2}{5} + \frac{2}{5}$

5) $\frac{3}{12} + \frac{14}{12}$

6) $\frac{5}{7} + \frac{3}{7}$

7) $\frac{3}{20} + \frac{12}{20}$

8) $\frac{1}{9} + \frac{3}{9}$

9) $\frac{12}{16} + \frac{2}{16}$

10) $\frac{12}{32} + \frac{16}{32}$

11) Kym is trying to fit 2 boxes into the truck of his car. One box is 1/5 of a foot tall and the other is 3/5 of a foot tall. Stacked on top of each other, what is the combined height of the boxes?

Homework

Solve the following problems. Simplify to lowest terms:

12) $\frac{1}{4} + \frac{3}{4}$

13) $\frac{2}{6} + \frac{3}{6}$

14) $\frac{2}{8} + \frac{4}{8}$

15) $\frac{2}{7} + \frac{2}{7}$

16) $\frac{6}{18} + \frac{6}{18}$

17) $\frac{4}{13} + \frac{3}{13}$

18) $\frac{4}{30} + \frac{11}{30}$

19) $\frac{11}{12} + \frac{15}{12}$

20) $\frac{4}{16} + \frac{6}{16}$

21) $\frac{44}{100} + \frac{36}{100}$

22) Grace walked three-tenths of a mile from school to Ed's house and 1/10 of a mile from Ed's house to her own house. How many miles did Grace walk in all?

Adding Mixed Numbers with Common Denominators

Classwork

Add the following mixed numbers. Simplify to lowest terms:

23) $1\frac{1}{2} + 2\ \frac{1}{2}$

24) $1\frac{1}{3} + \ 3\frac{2}{3}$

25) $4\frac{1}{4} + 5\ \frac{1}{4}$

26) $8\frac{2}{5} + 1\ \frac{3}{5}$

27) $1\frac{1}{12} + 2\ \frac{5}{12}$

28) $3\frac{5}{7} + 2\ \frac{3}{7}$

29) $9\frac{3}{20} + 5\ \frac{11}{20}$

30) $6\frac{1}{9} + \ 4\frac{4}{9}$

31) $2\frac{1}{16} + 3\ \frac{5}{16}$

32) $3\frac{3}{32} + 11\ \frac{15}{32}$

33) Jose has $7\frac{2}{3}$ yards of red crepe paper and $5\frac{2}{3}$ yards of blue crepe paper. What is the total number of yards of crepe paper that he has to decorate for the party?

Homework

Add the following mixed numbers. Simplify to lowest terms:

34) $1\frac{1}{4} + 2\frac{3}{4}$

35) $3\frac{1}{6} + 2\frac{3}{6}$

36) $1\frac{3}{8} + 3\frac{5}{8}$

37) $4\frac{2}{7} + 4\frac{2}{7}$

38) $5\frac{1}{18} + 2\frac{7}{18}$

39) $2\frac{4}{13} + 3\frac{11}{13}$

40) $10\frac{17}{30} + 1\frac{14}{30}$

41) $7\frac{11}{12} + \frac{5}{12}$

42) $3\frac{1}{16} + 6\frac{7}{16}$

43) $21\frac{57}{100} + 43\frac{73}{100}$

44) Nate has one piece of rope that is $5\frac{1}{8}$ feet long. He also has another piece of rope that is $3\frac{3}{8}$ feet long. If he combines the rope, how many feet does he have?

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<u>Subtracting Fractions with Common Denominators</u>

Classwork

Subtract the following fractions. Simplify to lowest terms:

45) $\frac{5}{2} - \frac{3}{2}$

46) $\frac{3}{5} - \frac{2}{5}$

47) $\frac{6}{9} - \frac{1}{9}$

48) $\frac{5}{7} - \frac{2}{7}$

49) $\frac{11}{6} - \frac{5}{6}$

50) $\frac{7}{8} - \frac{3}{8}$

51) $\frac{22}{11} - \frac{13}{11}$

52) $\frac{15}{20} - \frac{9}{20}$

53) $\frac{67}{88} - \frac{23}{88}$

54) $\frac{7}{12} - \frac{3}{12}$

55) Tom watched a beetle and spider on the sidewalk. The beetle crawled 2/5 of a yard and the spider 1/5 of a yard. How much farther did the beetle crawl than the spider?

Homework

Subtract the following fractions. Simplify to lowest terms:

56) $\frac{7}{2} - \frac{3}{2}$

57) $\frac{6}{5} - \frac{3}{5}$

58) $\frac{4}{9} - \frac{2}{9}$

59) $\frac{6}{7} - \frac{5}{7}$

60) $\frac{8}{10} - \frac{2}{10}$

61) $\frac{23}{8} - \frac{11}{8}$

62) $\frac{22}{44} - \frac{2}{44}$

63) $\frac{17}{20} - \frac{7}{20}$

64) $\frac{84}{120} - \frac{22}{120}$

65) $\frac{9}{16} - \frac{3}{16}$

66) Professor Pacheco weighed two pieces of metal for an experiment. The piece of iron weighed 3/6 of a pound and the piece of aluminum weighed two-sixths of a pound. How much more did the piece of iron weigh than the piece of aluminum?

Subtracting Mixed Numbers with Common Denominators

Classwork

Subtract the following mixed numbers. Simplify to lowest terms:

67) $2\frac{3}{4} - 1\frac{1}{4}$

68) $5\frac{2}{5} - 2\frac{1}{5}$

69) $6\frac{7}{8} - 1\frac{3}{8}$

70) $3\frac{14}{22} - 3\frac{3}{22}$

71) $7\frac{5}{6} - 4\frac{3}{6}$

72) $43\frac{13}{14} - 13\frac{11}{14}$

73) $11\frac{1}{9} - 10\frac{1}{9}$

74) $12\frac{3}{4} - 8\frac{1}{4}$

75) $5\frac{8}{10} - 3\frac{6}{10}$

76) $27\frac{23}{25} - 16\frac{8}{25}$

77) Ms. Hernandez has $9\frac{7}{12}$ feet of fabric. She uses $3\frac{5}{12}$ feet of the fabric to make a pillow. How many feet of fabric does she have left?

Homework

Subtract the following mixed numbers. Simplify to lowest terms:

78) $3\frac{2}{4} - 1\frac{1}{4}$

79) $4\frac{2}{3} - 2\frac{1}{3}$

80) $5\frac{7}{9} - 3\frac{2}{9}$

81) $6\frac{12}{21} - 5\frac{5}{21}$

82) $7\frac{4}{6} - 7\frac{1}{6}$

83) $13\frac{15}{24} - 11\frac{6}{24}$

84) $41\frac{13}{15} - 30\frac{6}{15}$

85) $15\frac{3}{5} - 6\frac{2}{5}$

86) $7\frac{7}{8} - 2\frac{5}{8}$

87) $79\frac{33}{50} - 56\frac{8}{50}$

88) The school garden club got a donation of $40\frac{3}{4}$ feet of fencing to put around the garden they are starting. They end up using $34\frac{1}{4}$ feet of the fencing. How many feet of fencing is left over?

<u>Subtracting Mixed Numbers with Common Denominators- Regrouping</u>

Classwork

Subtract the following mixed numbers. Remember to regroup. Simplify to lowest terms:

89) $7\frac{2}{11} - 3\frac{8}{11}$

90) $12\frac{1}{5} - 4\frac{5}{5}$

91) $3\frac{5}{12} - 1\frac{7}{12}$

92) $6\frac{2}{9} - \frac{8}{9}$

93) $4\frac{1}{3} - 3\frac{2}{3}$

94) On Wednesday high tide reached thirty and two fifths feet from the boardwalk. On Saturday it was full moon and high tide reached twenty nine and four fifths feet from the boardwalk. What is the difference between these two high tides?

Homework

95) $9\frac{1}{6} - 3\frac{5}{6}$

96) $14\frac{2}{7} - 9\frac{4}{7}$

97) $6\frac{3}{16} - 2\frac{9}{16}$

98) $3\frac{5}{7} - 2\frac{6}{7}$

99) $7\frac{1}{9} - \frac{7}{9}$

Multiplying Fractions and Whole Numbers

Classwork

Multiply each fraction and whole number. Simplify to lowest terms:

100) $2 \bullet \frac{1}{2}$

101) $4 \bullet \frac{2}{3}$

102) $4 \bullet \frac{1}{5}$

103) $8 \bullet \frac{3}{5}$

104) $7 \bullet \frac{5}{12}$

105) $3 \bullet \frac{3}{7}$

106) $9 \bullet \frac{11}{20}$

107) $6 \bullet \frac{4}{9}$

108) $2 \bullet \frac{5}{16}$

109) $3 \bullet \frac{15}{32}$

Homework

Multiply each fraction and whole number. Simplify to lowest terms:

110) $5 \bullet \frac{3}{4}$

111) $3 \bullet \frac{5}{6}$

112) $2 \bullet \frac{5}{8}$

113) $4 \bullet \frac{2}{7}$

114) $5 \bullet \frac{7}{18}$

115) $2 \bullet \frac{11}{13}$

116) $10 \bullet \frac{14}{30}$

117) $7 \bullet \frac{5}{12}$

118) $3 \bullet \frac{7}{16}$

119) $21 \bullet \frac{73}{100}$

Unit Review

Multiple Choice: Circle the correct answer choice.

120) Sue's mother sells gift baskets online. She sells 7/9 of the baskets online. Which is equivalent to 7/9?

a. 1/9 + 2/9 + 6/9
b. 1/9 + 1/9 + 4/9 + 3/9
c. 1/9 + 3/9 + 3/9
d. 2/9 + 2/9 + 1/9

121) Marc planted beans in 5/10 of his garden and peas in 2/10 of his garden. What fraction of the garden has beans or peas?

a. 3/10
b. 7/20
c. 4/10
d. 7/10

122) Marsha used 2 5/8 cups of walnuts and 1 2/8 cups of almonds to make a nut mix. How many more cups of walnuts than almonds did Sue use?

a. 1/8 cup
b. 1 3/8 cup
c. 3 1/8 cup
d. 3 3/8 cup

123) Tony needs 5/10 yard of denim and 3/10 of canvas to make a tote bag. How much fabric does Tony need in all?

a. 2/10 yard
b. 7/10 yard
c. 2/3 yard
d. 8/10 yard

124) Elizabeth's mom sells toys online. She sold 8/10 of her inventory on line. Which expression is equivalent to 8/10?

a. 1/10 + 1/10 + 1/10 + 1/10 + 2/10
b. 1/10 + 2/10 + 3/10 + 3/10
c. 2/10 + 2/10 + 2/10 + 2/10
d. 4/10 + 1/10 + 1/10 + 1/10

125) In a survey, 4/7 of the students chose winter as their favorite season and 2/7 of the students chose spring. What fraction of the students surveyed chose winter or spring?

a. 5/7
b. 6/7
c. 2/7
d. 8/7

126) Karen has two lengths of yarn. The yellow yarn is 5 3/8 feet long, and the orange yarn is 3 4/8 feet long. How much yarn does Kate have in all?

a. 7/8
b. 2 7/8
c. 6 7/ 8
d. 8 7/8

127) Manuel used repeated addition to show 5 x 4/7. Which shows an expression Manuel could write?

a. 1/7 + 1/7 + 1/7+ 1/7 + 1/7
b. 4/7 + 4/7 + 4/7 + 4/7 + 4/7
c. 5/7 + 5/7 + 5/7 + 5/7 + 5/7
d. 5 + 4/7 + 4/7 + 4/7 + 4/7 + 4/7

128) Oscar walks 6/10 of a mile every day. How far does Oscar walk in 7 days?

a. 13/10 miles
b. 13miles
c. 42/10 miles
d. 29/10 miles

129) Bobby recorded a baseball game that lasted 3 1/2 hours. Bobby watched the game 4 times last week. How many hours did Bobby spend watching the game?

a. 7 1/2 hours
b. 14 hours
c. 10 hours
d. 11 hours

130) Alan uses 2/3 cup of orange juice to make a smoothie. How much orange juice will he use to make 7 smoothies?

a. 14/3 cups
b. 12/3 cups
c. 15/3 cups
d. 9/3 cups

131) Jack used repeated addition to show 6 x 2/3. Which shows an expression Jack could write?

a. 1/3 + 1/3 + 1/3 + 1/3 + 1/3 + 1/3
b. 2/3 + 2/3 + 2/3 + 2/3 + 2/3 + 2/3
c. 2/12 + 2/12 + 2/12 + 2/12 + 2/12 + 2/12
d. 6+ 1/3 + 1/3 + 1/3 + 1/3 + 1/3

132) Mike is making a wooden sign. He cuts a block of wood to measure 4 3/4 inches. How can he write 4 3/4 inches as a fraction?

a. 43/4 inches
b. 16/4 inches
c. 19/4 inches
d. 23/4 inches

133) Rose solved a problem that an answer of 31/4. How can Rose write 31/4 as a mixed number?

a. 7 3/4
b. 6 3/4
c. 5 3/4
d. 31/4

Short Constructed Response:

134) 4/10 + 3/10 =

135) 5 6/7 + 7 3/7 =

136) 9/23 - 4/23 =

137) 12/13 – 9/13 =

138) 8 6/7 - 2 3/7 =

139) 9 x 1/2 =

Extended Constructed Response: Answer the following question completely, partial credit will be given.

140) Hannah ate two-sevenths of her pie before lunch. Then after lunch she ate three-sevenths of her pie. She then gave the amount of pie she did not eat to her friend Steve. He didn't want any so he threw his portion in the garbage. At that point Mario walked in with a two more pies. All the pie was put in the fridge. Show your work for each question.

a. How much pie did Hannah eat?

b. How much pie did Steve throw away?

c. How much pie was put into the fridge?

Answer Key:

1) 1
2) 1
3) $\frac{3}{4}$
4) $\frac{4}{5}$
5) $1\frac{5}{12}$
6) $1\frac{1}{7}$
7) $\frac{3}{4}$
8) $\frac{4}{9}$
9) $\frac{7}{8}$
10) $\frac{7}{8}$
11) $\frac{4}{5}$ of a foot tall
12) 1
13) $\frac{5}{6}$
14) $\frac{3}{4}$
15) $\frac{4}{7}$
16) $\frac{2}{3}$
17) $\frac{7}{13}$
18) $\frac{1}{2}$
19) $2\frac{1}{6}$
20) $\frac{5}{8}$
21) $\frac{4}{5}$
22) $\frac{2}{5}$ of a mile
23) 4
24) 5
25) $9\frac{1}{2}$
26) 10
27) $3\frac{1}{2}$
28) $6\frac{1}{7}$
29) $14\frac{7}{10}$
30) $10\frac{5}{9}$
31) $5\frac{3}{8}$
32) $14\frac{9}{16}$
33) $13\frac{1}{3}$ yards
34) 4
35) $5\frac{2}{3}$
36) 5
37) $8\frac{4}{7}$
38) $7\frac{4}{9}$
39) $6\frac{2}{13}$
40) $12\frac{1}{30}$
41) $8\frac{1}{3}$

42) $9\frac{1}{2}$

43) $65\frac{3}{10}$

44) $8\frac{1}{2}$ feet

45) 1

46) $\frac{1}{5}$

47) $\frac{5}{9}$

48) $\frac{3}{7}$

49) 1

50) $\frac{1}{2}$

51) $\frac{9}{11}$

52) $\frac{3}{10}$

53) $\frac{1}{2}$

54) $\frac{1}{3}$

55) $\frac{1}{5}$ of a yard

56) 2

57) $\frac{3}{5}$

58) $\frac{2}{9}$

59) $\frac{1}{7}$

60) $\frac{3}{5}$

61) $1\frac{1}{2}$

62) $\frac{5}{11}$

63) $\frac{1}{2}$

64) $\frac{31}{60}$

65) $\frac{3}{8}$

66) $\frac{1}{6}$ of a pound

67) $1\frac{1}{2}$

68) $3\frac{1}{5}$

69) $5\frac{1}{2}$

70) $\frac{1}{2}$

71) $3\frac{1}{3}$

72) $30\frac{1}{7}$

73) 1

74) $4\frac{1}{2}$

75) $2\frac{1}{5}$

76) $11\frac{3}{5}$

77) $6\frac{1}{6}$ feet

78) $2\frac{1}{4}$

79) $2\frac{1}{3}$

80) $2\frac{5}{9}$

81) $1\frac{1}{3}$

82) $\frac{1}{2}$

83) $2\frac{3}{8}$

84) $11\frac{7}{15}$

85) $9\frac{1}{5}$

86) $5\frac{1}{4}$

87) $23\frac{1}{2}$

88) $6\frac{1}{2}$ feet

89) $3\frac{5}{11}$

90) $7\frac{1}{5}$

91) $1\frac{5}{6}$

92) $5\frac{1}{3}$

93) $\frac{2}{3}$

94) $\frac{3}{5}$ feet

95) $5\frac{1}{3}$

96) $4\frac{5}{7}$

97) $3\frac{5}{8}$

98) $\frac{6}{7}$

99) $6\frac{1}{3}$

100) *1*

101) $2\frac{2}{3}$

102) $\frac{4}{5}$

103) $4\frac{4}{5}$

104) $2\frac{11}{12}$

105) $1\frac{2}{7}$

106) $4\frac{19}{20}$

107) $2\frac{2}{3}$

108) $\frac{5}{8}$

109) $1\frac{35}{32}$

110) $3\frac{3}{4}$

111) $2\frac{1}{2}$

112) $1\frac{1}{4}$

113) $1\frac{1}{7}$

114) $1\frac{17}{18}$

115) $1\frac{9}{13}$

116) $6\frac{2}{3}$

117) $2\frac{11}{12}$

118) $1\frac{5}{16}$

119) $15\frac{33}{100}$

120) c
121) d
122) b
123) d
124) c
125) c
126) d
127) b
128) c
129) b
130) a
131) b
132) c
133) a
134) 7/10
135) 12 9/7 = 13 2/7
136) 13/23
137) 3/13
138) 6 3/7
139) 9/2 = 4 ½
140) a. 5/7 b. 2/7
c. 2 2/7