RATIONAL ARITHMETIC PRE-POSTTEST

Name: _____ ***NO CALCULATORS!***

Round the following numbers as indicated.

1. 1134 to the nearest hundred

2. 2501 to the nearest thousand

3. 1,254,016 to the nearest ten(s?)

4. 105.47 to the nearest whole number

5. 2,347,045 to the nearest hundred thousand

Reduce each of the following fractions to lowest terms.

6. $\frac{7}{21} =$ **7**. $\frac{9}{144} =$ **8**. $-\frac{5}{65} =$ **9**. $\frac{38}{212} =$ **10**. $-\frac{7}{84} =$

Find the missing part for each of the following.

11. $\frac{3}{4} = \frac{\quad}{20}$ **12**. $\frac{3}{7} = \frac{27}{\quad}$ **13**. $\frac{\quad}{21} = \frac{12}{63}$ **14**. $-\frac{1}{\quad} = -\frac{15}{75}$ **15**. $\frac{12}{35} = \frac{72}{\quad}$

Find a common denominator for each pair of fractions.

16. $\frac{2}{3}, \frac{2}{7}$ **17**. $\frac{8}{15}, \frac{3}{9}$ **18**. $\frac{3}{10}, -\frac{13}{85}$ **19**. $\frac{4}{24}, \frac{3}{12}$ **20**. $\frac{1}{2}, \frac{4}{5}$

Write each list of fractions in ascending (least to greatest) order.

21. $7\frac{3}{10},\ 7\frac{3}{8},\ 7\frac{5}{12},\ 7\frac{1}{3}$ **22**. $-\frac{56}{10},\ -\frac{45}{8},\ -\frac{17}{3},\ -\frac{47}{9}$ **23**. $\frac{2}{3},\ \frac{3}{5},\ \frac{1}{2},\ \frac{1}{3}$

24. $8\frac{1}{9},\ 8\frac{18}{25},\ 8\frac{6}{11},\ 8\frac{4}{9}$ **25**. $\frac{14}{11},\ 1\frac{1}{3},\ 1\frac{1}{5},\ 1\frac{3}{8}$

Add. Write each sum in simplest form.

26. $\frac{1}{4}+\frac{1}{2}$ **27.** $\frac{1}{2}+\frac{1}{7}$ **28.** $\frac{3}{4}+\frac{1}{10}$ **29.** $\frac{2}{5}+\frac{5}{6}$ **30.** $\frac{7}{9}+\frac{1}{2}$

Subtract. Write each difference in simplest form.

31. $\frac{1}{3}-\frac{4}{9}$ **32.** $\frac{13}{15}-\frac{2}{3}$ **33.** $\frac{1}{4}-\frac{1}{3}$ **34.** $\frac{3}{5}-\frac{1}{3}$ **35.** $\frac{13}{20}-\frac{5}{8}$

Multiply. Write each product in simplest form.

36. $\frac{1}{2}\cdot\frac{1}{4}$ **37.** $\frac{1}{3}\cdot\frac{5}{8}$ **38.** $\frac{2}{7}\cdot\frac{14}{5}$ **39.** $\frac{2}{5}\cdot\frac{2}{9}$ **40.** $\frac{1}{3}\cdot\frac{9}{10}$

Divide. Write each quotient in simplest form.

41. $\frac{1}{3}\div 2$ **42.** $\frac{4}{5}\div\frac{2}{3}$ **43.** $6\div\frac{5}{6}$ **44.** $\frac{11}{12}\div\frac{2}{3}$ **45.** $\frac{4}{7}\div\frac{4}{21}$

Change each improper fraction to a mixed number.

46. $\frac{12}{5}$ **47.** $\frac{45}{7}$ **48.** $-\frac{73}{3}$ **49.** $\frac{46}{6}$ **50.** $-\frac{13}{2}$

Change each mixed number to an improper fraction.

51. $2\frac{1}{3}$ **52**. $32\frac{4}{5}$ **53**. $-3\frac{5}{6}$ **54**. $5\frac{2}{7}$ **55**. $9\frac{1}{9}$

Add. Write each sum in simplest form.

56. $2+3\frac{1}{3}$ **57**. $4\frac{1}{7}+\frac{8}{7}$ **58**. $5\frac{2}{9}+1$ **59**. $4\frac{1}{8}+3\frac{1}{2}$ **60**. $2\frac{3}{8}+9\frac{2}{5}$

Subtract. Write each difference in simplest form.

61. $2\frac{4}{7}-1\frac{1}{7}$ **62**. $\frac{5}{2}-2\frac{7}{8}$ **63**. $9\frac{4}{15}-14$ **64**. $2\frac{3}{4}-1\frac{2}{3}$ **65**. $9\frac{4}{5}-3\frac{1}{4}$

Multiply. Write each product in simplest form.

66. $1\frac{2}{3}\cdot\frac{1}{5}$ **67**. $3\cdot 2\frac{2}{3}$ **68**. $3\frac{1}{8}\cdot 6$ **69**. $6\frac{1}{2}\cdot\frac{25}{26}$ **70**. $1\frac{5}{8}\cdot 3\frac{1}{3}$

Divide. Write each quotient in simplest form.

71. $5\div 1\frac{2}{3}$ **72**. $\frac{3}{8}\div 1\frac{1}{8}$ **73**. $\frac{1}{4}\div\frac{9}{8}$ **74**. $1\frac{3}{4}\div 2\frac{2}{3}$ **75**. $2\frac{1}{5}\div 2\frac{1}{4}$

Change each fraction to its decimal equivalent.

76. $\frac{3}{4}$ **77**. $\frac{1}{9}$ **78**. $2\frac{2}{3}$ **79**. $-1\frac{5}{8}$ **80**. $\frac{4}{10}$

Change each decimal to its equivalent fraction.

81. -3.125 **82**. 0.15 **83**. $12.\overline{3}$ **84**. -7.5 **85**. 0.226

Add. Express answer as a decimal.

86. $\frac{1}{2}+0.25$ **87**. $1\frac{1}{10}+0.\overline{3}$

Add. Express answer as a fraction.

88. $0.3+\frac{2}{3}$ **89**. $\frac{4}{5}+0.2$ **90**. $\frac{1}{9}+\left(-0.\overline{1}\right)$

Write each radical in simplest form.

91. $\sqrt{12}$ **92**. $-\sqrt{44}$ **93**. $\sqrt{144}$ **94**. $\sqrt{48}$ **95**. $\frac{\sqrt{45}}{9}$

Write each complex fraction in simplest form.

96. $\frac{\frac{5}{2}}{3}$ **97**. $\frac{\frac{1}{2}}{\frac{3}{8}}$ **98**. $\frac{1-\frac{1}{3}+\frac{1}{5}}{\frac{1}{7}-\frac{1}{3}}$ **99**. $\frac{1}{\frac{1}{5}}$ **100**. $\frac{-\frac{2}{5}}{\frac{1}{6}}$