Name:

Final Exam Practice Pack – Section 1

Key Points

- **Converting** from a decimal to a fraction is simply **division of the ratio**
- **Equivalence** is **multiplying a fraction by 1**, represented as any other number divided by itself
- **Comparing** fractions is easiest when you have a **common denominator**

- **Adding and Subtracting** a fraction requires a **common denominator**
- **Multiplying** is top with top, bottom with bottom, **simplify first**
- **Division, flip** the **second fraction**, simplify, then **multiply**
- **Always convert** to **improper fractions** when necessary, before doing operations with fractions

Execute the following operations by displaying diagrams of the situation

1. $7 + (-3)$

2. $(-2) + (-5)$

3. $6 - (-4)$

Add the following Integers without a calculator

4. $14 + -7$	_____	5. $12 + (-5)$	_____
6. $(-3) + (-12)$	_____	7. $-6 + 14$	_____
8. $14 + 3 + (-6)$	_____	9. $-5 + (-3) + 3$	_____
10. $-10 + 5 + (-6)$	_____	11. $(-4) + (-5) + 9$	_____
12. $-13 + (-8) + 10$	_____	13. $-17 + 13 + (-15)$	_____

Subtract the following Integers without a calculator

14. $-18-5$	_____	15. $18-12$	_____
16. $-7-(-2)$	_____	17. $9-(-13)$	_____
18. $-1-18-(-10)$	_____	19. $-12-(-3)-3$	_____
20. $7-(-7)-(-8)$	_____	21. $-1-(-15)-(-3)$	_____
22. $-4-(7)-(-9)$	_____	23. $-21-(-17)-4$	_____

Add and Subtract the following decimal integers without a calculator

24. $-4.12+1.64$	_____	25. $-5.435+(-3.638)$	_____
26. $4.12-1.64$	_____	27. $-5.435-(-3.638)$	_____
28. $7.123-(-1.6)$	_____	29. $-7.123+(-1.6)$	_____

Multiply and Divide the following integers without a calculator

30. $-6*8$	_____	31. $-6*(-8)$	_____
32. $2*(-5)$	_____	33. $-4*3$	_____
34. $4*-3*-6$	_____	35. $4*(3)*-6$	_____
36. $10*7*(-12)$	_____	37. $4*(-7)*12$	_____
38. $-40\div(-8)$	_____	39. $-72\div 12$	_____
40. $-132\div 3$	_____	41. $-200\div 4$	_____
42. $-70\div -2*(-1)$	_____	43. $28\div(4)*(-3)$	_____
44. $-56\div(8)*(-6)$	_____	45. $-720\div -3*(-3)$	_____

Convert the following two fractions to decimals, show all the division steps

46. $\frac{6}{7}$

47. $\frac{2}{9}$

Convert the following fractions to equivalent fractions with the given denominator

48. $\frac{3}{4} = \frac{\quad}{24}$

49. $-\frac{2}{3} = \frac{\quad}{12}$

50. $\frac{12}{15} = \frac{\quad}{90}$

51. $-\frac{4}{5} = \frac{\quad}{135}$

52. $\frac{1}{7} = -\frac{\quad}{77}$

53. $\frac{6}{7} = \frac{\quad}{35}$

54. $\frac{12}{13} = \frac{\quad}{39}$

55. $\frac{9}{11} = \frac{\quad}{33}$

56. $-\frac{2}{9} = -\frac{\quad}{81}$

57. $\frac{14}{3} = \frac{\quad}{15}$

58. $\frac{18}{7} = \frac{\quad}{35}$

59. $\frac{5}{8} = \frac{\quad}{64}$

Compare the following fractions using $<, >, =$. Justify your reasoning

60. $\frac{2}{3} \quad \frac{5}{6}$

61. $\frac{1}{2} \quad \frac{26}{52}$

62. $-\frac{6}{7} \quad -\frac{7}{8}$

63. $\frac{4}{15} \quad \frac{17}{60}$

64. $\frac{2}{3} \quad \frac{2}{3}$

65. $\frac{11}{13} \quad \frac{10}{12}$

66. $\frac{4}{7}$ $\frac{5}{8}$

67. $\frac{6}{6}$ $\frac{13}{13}$

68. $\frac{7}{9}$ $\frac{5}{7}$

Convert the following fractions from MIXED to IMPROPER or VICE VERSA

69. $-3\frac{2}{7} \rightarrow$

70. $4\frac{1}{4} \rightarrow$

71. $6\frac{4}{5} \rightarrow$

72. $5\frac{7}{11} \rightarrow$

73. $-2\frac{5}{6} \rightarrow$

74. $4\frac{7}{10} \rightarrow$

75. $\frac{16}{3} \rightarrow$

76. $-\frac{28}{5} \rightarrow$

77. $-\frac{18}{7} \rightarrow$

78. $-\frac{35}{6} \rightarrow$

79. $\frac{17}{4} \rightarrow$

80. $-\frac{53}{10} \rightarrow$

Simplify the following fractions

81. $\frac{24}{36} \rightarrow$

82. $\frac{60}{120} \rightarrow$

83. $\frac{230}{460} \rightarrow$

84. $\frac{12}{48} \rightarrow$

85. $-\frac{15}{21} \rightarrow$

86. $-\frac{12}{60} \rightarrow$

87. $\frac{54}{27} \rightarrow$

88. $\frac{11}{88} \rightarrow$

Add the following fractions, leave answers in simplified form

89. $\frac{4}{5} + \frac{3}{5}$ _____

90. $\frac{6}{5} + \frac{3}{15}$ _____

91. $\frac{3}{7} + \frac{11}{21}$ _____

92. $-\frac{7}{4} + \frac{5}{4}$ _____

93. $\frac{8}{3} + \frac{1}{5}$ _____

94. $\frac{7}{12} + \frac{3}{7}$ _____

95. $\frac{1}{4} + \frac{7}{6}$ _____

96. $3\frac{3}{5} + 5\frac{2}{3}$ _____

97. $3\frac{4}{7} + 7\frac{2}{5}$ _____

98. $-3\frac{3}{8} + 2\frac{5}{6}$ _____

Subtract the following fractions, leave answers in simplified form

99. $\frac{7}{5} - \frac{4}{5}$ _____

100. $\frac{5}{7} - \frac{9}{14}$ _____

101. $\frac{3}{8} - \frac{5}{11}$ _____

102. $-\frac{7}{17} - \frac{1}{2}$ _____

103. $\frac{1}{4} - \frac{5}{6}$ _____

104. $-2\frac{2}{7} - 4\frac{1}{3}$ _____

105. $5\frac{4}{5} - 2\frac{2}{3}$ _____

106. $-2\frac{3}{4} - 3\frac{5}{8}$ _____

Perform the combined operations, leave answers as an improper fraction in simplified form

107. $\frac{1}{4} + \frac{11}{6} - \frac{5}{3}$ _____

108. $-2\frac{3}{5} + 4\frac{2}{3} - (-1\frac{2}{15})$ _____

109. $5\frac{4}{8} + 3\frac{13}{26} - 7\frac{5}{10}$ _____

110. $-2\frac{1}{4} + 4\frac{2}{3} - (-7\frac{5}{6})$ _____

Multiply the following, simplify before you multiply if desired, leave answer in simplified form

111. $\frac{1}{3} * \frac{12}{5}$ _____

112. $-\frac{7}{12} * \frac{2}{14}$ _____

113. $\frac{18}{28} * \frac{8}{3}$ _____

114. $\frac{16}{25} * \frac{30}{4} * \frac{2}{5}$ _____

115. $\frac{15}{14} * (-\frac{21}{5}) * \frac{15}{7}$ _____

116. $-\frac{7}{4} * \frac{2}{49} * \frac{14}{8}$ _____

Divide the following fractions, simplify when you can, leave answer in simplified form

117. $-\frac{2}{3} \div \frac{8}{9}$ _____

118. $-\frac{3}{4} \div \frac{21}{24}$ _____

119. $\frac{12}{5} \div 6$ _____

120. $2 \div \frac{12}{15}$ _____

121. $\frac{34}{121} \div \frac{2}{77}$ _____

122. $-\frac{48}{27} \div \frac{64}{9}$ _____

123. $-\frac{12}{17} \div \frac{36}{85}$ _____

124. $-\frac{343}{125} \div \frac{7}{5}$ _____

Answer the following, leave answer as a simplified fraction, improper if applicable

125. $4\frac{1}{2} * -3\frac{1}{3}$ _____

126. $4\frac{1}{2} \div 3\frac{1}{3}$ _____

127. $-2\frac{2}{5} * 4\frac{1}{3}$ _____

128. $-2\frac{2}{5} \div 4\frac{1}{3}$ _____

129. $2\frac{3}{4} \div 5\frac{1}{8} * 3\frac{2}{25}$ _____

130. $2\frac{1}{4} \div -2\frac{7}{16} * 5\frac{1}{8}$ _____

Calculate the following using your Order of Operations

131. $8 + 5 * 3$

132. $2 * 4 + 6 * 4$

133. $5 * 3 - 4 * 7$

134. $15 - 12 \div 6 - 2$

135. $15 \div 5 - 24 \div 8$

136. $25 - 30 \div 6 - 5$

137. $11 - 8 - 34 \div 2$

138. $-5 * 12 - 7 - 2$

Calculate the following using your Order of Operations

139. $9 - (4 * (-4))$

140. $(12 - 2) + 7$

141. $-9 - (12 - 5)$

142. $(-11 - 8) - 2$

143. $-(12 - 5) + (2 - 7)$

144. $200 \div (10 \div 5)$

145. $(128 \div 8) \div 4$

146. $5 * 12 - (7 + 7) \div -2$

Calculate the following using your Order of Operations

147. $2 * 3^3$

148. $(5 * 1)^3$

149. $-11 - 3^2$

150. $(-7 - 3)^2$

151. $2^4 \div 2^2 * 2^4 \div 2^3$

152. $(2^4 \div 2^2) * (2^4 \div 2^3)$

153. $\frac{6+4*4}{10+3*4}$

154. $\frac{(6-2)(4)}{(12-8)(4)}$

Simplify the following using your Order of Operations

155. $-13 + 2[(24 - 8) - (2 + 3^2)]$

156. $\frac{(2)^3+3^2}{35-5^2-3*6}$

157. $20 \div 4 + \{3 * 3^2 - [-3 + (6 - 3)]\}$

158. $\frac{2-2^4}{3(2+5)+2}$