

LESSON 17

Comparing Fractions

Fractions can be compared when the denominators are the same. If the denominators are different they must be made the same.

Example 1: Compare

$$\frac{3}{7} \quad \frac{4}{9}$$

Solution: Cross multiply in the direction of the arrows.

$$\begin{array}{ccc} \overset{27}{3} & \swarrow < \nearrow & \overset{28}{4} \\ \frac{3}{7} & & \frac{4}{9} \end{array} \quad \text{Write the products above}$$

$$\frac{3}{7} < \frac{4}{9} \quad \text{Since} \quad \frac{27}{63} < \frac{28}{63}$$

Example 2: Compare

$$\frac{4}{5} \quad \frac{11}{15}$$

$$\text{Now} \quad \frac{4}{5} = \frac{12}{15} \quad \frac{4}{5} > \frac{11}{15}$$

$$\text{Since} \quad \frac{12}{15} > \frac{11}{15}$$

Compare Each Pair Of Fractions With ">" Greater Than) or "<" Less Than or "="

1. $\frac{2}{9} < \frac{3}{10}$	11. $\frac{7}{10} \frac{5}{8}$	21. $\frac{4}{5} \frac{7}{8}$	31. $\frac{3}{5} \frac{5}{7}$	41. $\frac{3}{5} \frac{5}{8}$
2. $\frac{5}{8} \frac{7}{9}$	12. $\frac{2}{3} \frac{7}{10}$	22. $\frac{2}{3} \frac{5}{9}$	32. $\frac{3}{4} \frac{6}{7}$	42. $\frac{1}{4} \frac{2}{7}$
3. $\frac{8}{9} \frac{9}{10}$	13. $\frac{5}{6} \frac{7}{10}$	23. $\frac{3}{7} \frac{3}{8}$	33. $\frac{1}{5} \frac{2}{9}$	43. $\frac{7}{8} \frac{9}{10}$
4. $\frac{2}{3} \frac{4}{7}$	14. $\frac{6}{7} \frac{8}{9}$	24. $\frac{3}{4} \frac{4}{5}$	34. $\frac{5}{8} \frac{5}{9}$	44. $\frac{3}{4} \frac{7}{10}$
5. $\frac{3}{4} \frac{9}{10}$	15. $\frac{3}{4} \frac{9}{12}$	25. $\frac{1}{6} \frac{1}{8}$	35. $\frac{6}{7} \frac{5}{8}$	45. $\frac{3}{8} \frac{3}{8}$
6. $\frac{3}{7} \frac{5}{9}$	16. $\frac{3}{7} \frac{4}{9}$	26. $\frac{3}{4} \frac{5}{9}$	36. $\frac{4}{5} \frac{7}{9}$	46. $\frac{3}{5} \frac{3}{10}$
7. $\frac{5}{8} \frac{8}{9}$	17. $\frac{4}{5} \frac{5}{6}$	27. $\frac{2}{5} \frac{3}{7}$	37. $\frac{2}{3} \frac{4}{9}$	47. $\frac{7}{8} \frac{8}{9}$
8. $\frac{1}{2} \frac{3}{7}$	18. $\frac{2}{3} \frac{5}{7}$	28. $\frac{2}{3} \frac{6}{9}$	38. $\frac{4}{7} \frac{5}{8}$	48. $\frac{5}{7} \frac{8}{9}$
9. $\frac{5}{8} \frac{10}{16}$	19. $\frac{3}{4} \frac{3}{5}$	29. $\frac{5}{6} \frac{8}{9}$	39. $\frac{4}{5} \frac{8}{9}$	49. $\frac{2}{3} \frac{4}{6}$
10. $\frac{1}{2} \frac{2}{3}$	20. $\frac{1}{4} \frac{2}{9}$	30. $\frac{2}{3} \frac{5}{8}$	40. $\frac{5}{6} \frac{6}{7}$	50. $\frac{4}{5} \frac{5}{7}$

Compare Each Pair Of Fractions With ">" Greater Than) or "<" Less Than or "="

51. $\frac{3}{5}$ $\frac{7}{10}$ $\frac{6}{10} < \frac{7}{10}$	56. $\frac{7}{12}$ $\frac{1}{2}$ _____	61. $\frac{1}{3}$ $\frac{11}{30}$ _____	66. $\frac{3}{24}$ $\frac{7}{48}$ _____
52. $\frac{3}{4}$ $\frac{8}{12}$ _____	57. $\frac{9}{15}$ $\frac{2}{3}$ _____	62. $\frac{5}{24}$ $\frac{1}{6}$ _____	67. $\frac{15}{36}$ $\frac{29}{72}$ _____
53. $\frac{7}{10}$ $\frac{4}{5}$ _____	58. $\frac{11}{20}$ $\frac{3}{5}$ _____	63. $\frac{17}{30}$ $\frac{3}{5}$ _____	68. $\frac{3}{50}$ $\frac{2}{25}$ _____
54. $\frac{5}{8}$ $\frac{3}{4}$ _____	59. $\frac{7}{30}$ $\frac{3}{10}$ _____	64. $\frac{4}{25}$ $\frac{1}{5}$ _____	69. $\frac{1}{12}$ $\frac{3}{36}$ _____
55. $\frac{3}{7}$ $\frac{5}{14}$ _____	60. $\frac{5}{35}$ $\frac{1}{7}$ _____	65. $\frac{9}{11}$ $\frac{17}{22}$ _____	70. $\frac{4}{15}$ $\frac{17}{60}$ _____

Order Each Group Of Fractions Smallest To Largest

<p>71. $\frac{4}{15}$ $\frac{1}{3}$ $\frac{1}{5}$</p> <p>M $\frac{4}{15}$ L $\frac{5}{15}$ S $\frac{3}{15}$</p> <p>$\frac{1}{5} < \frac{4}{15} < \frac{1}{3}$</p>	<p>76. $\frac{5}{8}$ $\frac{1}{2}$ $\frac{3}{4}$</p> <p>— — —</p> <p>— — —</p>	<p>81. $\frac{6}{7}$ $\frac{29}{35}$ $\frac{4}{5}$</p> <p>— — —</p> <p>— — —</p>
<p>72. $\frac{5}{12}$ $\frac{1}{3}$ $\frac{1}{2}$</p> <p>— — —</p> <p>— — —</p>	<p>77. $\frac{3}{8}$ $\frac{5}{16}$ $\frac{1}{4}$</p> <p>— — —</p> <p>— — —</p>	<p>82. $\frac{7}{50}$ $\frac{13}{100}$ $\frac{2}{25}$</p> <p>— — —</p> <p>— — —</p>
<p>73. $\frac{1}{3}$ $\frac{1}{2}$ $\frac{1}{6}$</p> <p>— — —</p> <p>— — —</p>	<p>78. $\frac{2}{3}$ $\frac{23}{36}$ $\frac{1}{2}$</p> <p>— — —</p> <p>— — —</p>	<p>83. $\frac{3}{12}$ $\frac{13}{48}$ $\frac{9}{16}$</p> <p>— — —</p> <p>— — —</p>
<p>74. $\frac{1}{3}$ $\frac{13}{36}$ $\frac{7}{18}$</p> <p>— — —</p> <p>— — —</p>	<p>79. $\frac{11}{20}$ $\frac{1}{2}$ $\frac{4}{5}$</p> <p>— — —</p> <p>— — —</p>	<p>84. $\frac{3}{5}$ $\frac{3}{10}$ $\frac{29}{50}$</p> <p>— — —</p> <p>— — —</p>
<p>75. $\frac{5}{12}$ $\frac{1}{3}$ $\frac{1}{12}$</p> <p>— — —</p> <p>— — —</p>	<p>80. $\frac{2}{3}$ $\frac{17}{30}$ $\frac{1}{2}$</p> <p>— — —</p> <p>— — —</p>	<p>85. $\frac{23}{72}$ $\frac{5}{12}$ $\frac{5}{18}$</p> <p>— — —</p> <p>— — —</p>