

LESSON 10

Multiplication Of Fractions (Cancelling By Inspection)

Fractions can be multiplied giving reduced answers when like factors in numerators and denominators are cancelled.

Example 1: Multiply $\frac{3}{5} \times \frac{5}{7}$

'5' Appears in both a numerator and denominator and can be cancelled leaving '1's.

$$\frac{3}{\cancel{5}^1} \times \frac{\cancel{5}_1}{7} = \frac{3}{7}$$

Example 2: Multiply $\frac{3}{5} \times \frac{7}{12}$

3' Divides into 3 '1' time and into 12 '4' times.

$$\frac{\cancel{3}^1}{5} \times \frac{7}{\cancel{12}_4} = \frac{7}{20}$$

Cancel The Common Factors

Find A Reduced Answer

1. $\frac{3}{\cancel{5}_1} \times \frac{\cancel{5}^1}{7} = \frac{3}{7}$	11. $\frac{5}{\cancel{6}_3} \times \frac{\cancel{6}^1}{13} = \frac{5}{13}$	21. $\frac{8}{21} \times \frac{7}{9} = \frac{8}{27}$
2. $\frac{9}{11} \times \frac{4}{9} = \frac{4}{11}$	12. $\frac{3}{4} \times \frac{5}{6} = \frac{5}{8}$	22. $\frac{19}{24} \times \frac{3}{17} = \frac{19}{136}$
3. $\frac{5}{12} \times \frac{12}{17} = \frac{5}{17}$	13. $\frac{5}{9} \times \frac{1}{10} = \frac{1}{18}$	23. $\frac{5}{9} \times \frac{3}{8} = \frac{5}{24}$
4. $\frac{4}{7} \times \frac{3}{4} = \frac{3}{7}$	14. $\frac{3}{7} \times \frac{14}{19} = \frac{6}{19}$	24. $\frac{5}{9} \times \frac{11}{15} = \frac{11}{27}$
5. $\frac{12}{19} \times \frac{19}{25} = \frac{12}{25}$	15. $\frac{5}{7} \times \frac{9}{10} = \frac{9}{14}$	25. $\frac{13}{42} \times \frac{7}{8} = \frac{13}{48}$
6. $\frac{2}{7} \times \frac{7}{9} = \frac{2}{9}$	16. $\frac{2}{11} \times \frac{3}{4} = \frac{3}{22}$	26. $\frac{3}{8} \times \frac{2}{5} = \frac{3}{20}$
7. $\frac{4}{25} \times \frac{25}{27} = \frac{4}{27}$	17. $\frac{9}{70} \times \frac{7}{11} = \frac{9}{110}$	27. $\frac{7}{9} \times \frac{5}{28} = \frac{5}{36}$
8. $\frac{8}{9} \times \frac{5}{8} = \frac{5}{9}$	18. $\frac{2}{3} \times \frac{5}{16} = \frac{5}{24}$	28. $\frac{3}{5} \times \frac{11}{12} = \frac{11}{20}$
9. $\frac{14}{83} \times \frac{83}{89} = \frac{14}{89}$	19. $\frac{7}{9} \times \frac{2}{35} = \frac{2}{45}$	29. $\frac{7}{45} \times \frac{5}{8} = \frac{7}{72}$
10. $\frac{17}{98} \times \frac{11}{17} = \frac{11}{98}$	20. $\frac{2}{15} \times \frac{3}{5} = \frac{2}{25}$	30. $\frac{1}{4} \times \frac{2}{7} = \frac{1}{14}$

Cancel The Common Factors

Find A Reduced Answer

31. $\frac{3}{7} \times \frac{19}{12} = \frac{19}{28}$	41. $\frac{9}{49} \times \frac{7}{8} = \frac{9}{56}$	51. $\frac{5}{7} \times \frac{16}{55} = \frac{16}{77}$
32. $\frac{11}{28} \times \frac{7}{15} = \frac{11}{60}$	42. $\frac{5}{18} \times \frac{2}{3} = \frac{5}{27}$	52. $\frac{17}{30} \times \frac{5}{8} = \frac{17}{48}$
33. $\frac{2}{7} \times \frac{5}{12} = \frac{5}{42}$	43. $\frac{7}{8} \times \frac{11}{56} = \frac{11}{64}$	53. $\frac{3}{8} \times \frac{7}{30} = \frac{7}{80}$
34. $\frac{3}{5} \times \frac{7}{9} = \frac{7}{15}$	44. $\frac{5}{21} \times \frac{3}{8} = \frac{5}{56}$	54. $\frac{5}{7} \times \frac{13}{45} = \frac{13}{63}$
35. $\frac{3}{14} \times \frac{2}{5} = \frac{3}{35}$	45. $\frac{2}{3} \times \frac{13}{20} = \frac{13}{30}$	55. $\frac{2}{10} \times \frac{2}{9} = \frac{2}{45}$
36. $\frac{8}{35} \times \frac{7}{15} = \frac{8}{75}$	46. $\frac{5}{7} \times \frac{18}{35} = \frac{18}{49}$	56. $\frac{7}{9} \times \frac{5}{42} = \frac{5}{54}$
37. $\frac{3}{7} \times \frac{11}{24} = \frac{11}{56}$	47. $\frac{7}{9} \times \frac{11}{70} = \frac{11}{90}$	57. $\frac{3}{7} \times \frac{4}{15} = \frac{4}{35}$
38. $\frac{5}{7} \times \frac{33}{40} = \frac{33}{56}$	48. $\frac{23}{50} \times \frac{5}{9} = \frac{23}{90}$	58. $\frac{16}{25} \times \frac{5}{17} = \frac{16}{85}$
39. $\frac{11}{30} \times \frac{3}{7} = \frac{11}{70}$	49. $\frac{7}{16} \times \frac{2}{9} = \frac{7}{72}$	59. $\frac{7}{9} \times \frac{16}{49} = \frac{16}{63}$
40. $\frac{7}{9} \times \frac{8}{63} = \frac{8}{81}$	50. $\frac{2}{3} \times \frac{7}{8} = \frac{7}{12}$	60. $\frac{5}{18} \times \frac{3}{8} = \frac{5}{48}$

Cancel The Common Factors

Find A Reduced Answer

61. $\frac{2}{15} \times \frac{5}{6} = \frac{1}{9}$	71. $\frac{2}{3} \times \frac{9}{16} = \frac{3}{8}$	81. $\frac{7}{24} \times \frac{3}{56} = \frac{1}{64}$
62. $\frac{5}{6} \times \frac{3}{10} = \frac{1}{4}$	72. $\frac{2}{15} \times \frac{3}{14} = \frac{1}{35}$	82. $\frac{2}{21} \times \frac{7}{18} = \frac{1}{27}$
63. $\frac{2}{63} \times \frac{7}{10} = \frac{1}{45}$	73. $\frac{5}{14} \times \frac{7}{30} = \frac{1}{12}$	83. $\frac{5}{7} \times \frac{21}{25} = \frac{3}{5}$
64. $\frac{5}{9} \times \frac{3}{10} = \frac{1}{6}$	74. $\frac{7}{45} \times \frac{5}{28} = \frac{1}{36}$	84. $\frac{7}{45} \times \frac{5}{42} = \frac{1}{54}$
65. $\frac{2}{5} \times \frac{15}{16} = \frac{3}{8}$	75. $\frac{3}{4} \times \frac{2}{15} = \frac{1}{10}$	85. $\frac{2}{15} \times \frac{5}{18} = \frac{1}{27}$
66. $\frac{3}{20} \times \frac{5}{21} = \frac{1}{28}$	76. $\frac{7}{20} \times \frac{5}{49} = \frac{1}{28}$	86. $\frac{7}{18} \times \frac{0}{63} = 0$
67. $\frac{2}{9} \times \frac{3}{16} = \frac{1}{24}$	77. $\frac{0}{21} \times \frac{7}{40} = 0$	87. $\frac{3}{8} \times \frac{2}{9} = \frac{1}{12}$
68. $\frac{5}{14} \times \frac{7}{10} = \frac{1}{4}$	78. $\frac{7}{18} \times \frac{3}{14} = \frac{1}{12}$	88. $\frac{3}{7} \times \frac{14}{27} = \frac{2}{9}$
69. $\frac{5}{18} \times \frac{3}{25} = \frac{1}{30}$	79. $\frac{2}{21} \times \frac{3}{10} = \frac{1}{35}$	89. $\frac{5}{12} \times \frac{3}{20} = \frac{1}{16}$
70. $\frac{2}{7} \times \frac{21}{22} = \frac{3}{11}$	80. $\frac{5}{63} \times \frac{7}{40} = \frac{1}{72}$	90. $\frac{5}{18} \times \frac{3}{35} = \frac{1}{42}$