

LESSON 7

Reducing Fractions By Successive Division

Method 2: A fraction can be reduced by repeated division of the prime numbers common to both the numerator and denominator

Example 1: Reduce $\frac{36}{54}$

Start by dividing 36 and 54 by the smallest prime number that is a common factor. (2)

$$\frac{36}{54} = \frac{18}{27}$$

Next divide 18 and 27 by the smallest prime number that is a common factor. (3)

$$\frac{18}{27} = \frac{6}{9}$$

Next divide 6 and 9 by the smallest prime number that is a common factor. (3)

$$\frac{6}{9} = \frac{2}{3}$$

Hence: $\frac{36}{54} = \frac{18}{27} = \frac{6}{9} = \frac{2}{3}$

Find a Reduced Fraction By Successive Division Of Common Factors

1. $\frac{60}{72} = \frac{20}{24} = \frac{5}{6}$	11. $\frac{48}{64} = \frac{3}{4}$	21. $\frac{125}{1000} = \frac{1}{8}$
2. $\frac{48}{80} = \frac{3}{5}$	12. $\frac{80}{88} = \frac{10}{11}$	22. $\frac{75}{1000} = \frac{3}{40}$
3. $\frac{64}{96} = \frac{2}{3}$	13. $\frac{27}{54} = \frac{1}{2}$	23. $\frac{50}{1000} = \frac{1}{20}$
4. $\frac{54}{81} = \frac{2}{3}$	14. $\frac{48}{72} = \frac{2}{3}$	24. $\frac{875}{1000} = \frac{7}{8}$
5. $\frac{24}{60} = \frac{2}{5}$	15. $\frac{16}{96} = \frac{1}{6}$	25. $\frac{250}{1000} = \frac{1}{4}$
6. $\frac{72}{96} = \frac{3}{4}$	16. $\frac{42}{98} = \frac{3}{7}$	26. $\frac{80}{1000} = \frac{2}{25}$
7. $\frac{36}{90} = \frac{2}{5}$	17. $\frac{30}{45} = \frac{2}{3}$	27. $\frac{375}{1000} = \frac{3}{8}$
8. $\frac{27}{81} = \frac{1}{3}$	18. $\frac{56}{98} = \frac{4}{7}$	28. $\frac{625}{1000} = \frac{5}{8}$
9. $\frac{25}{65} = \frac{5}{13}$	19. $\frac{45}{75} = \frac{3}{5}$	29. $\frac{800}{1000} = \frac{4}{5}$
10. $\frac{16}{40} = \frac{2}{5}$	20. $\frac{28}{98} = \frac{2}{7}$	30. $\frac{25}{1000} = \frac{1}{40}$