

Name: _____

Period: _____ Date: _____

Greatest Common Factor (GCF), Prime Factoring & Reducing Fractions

Answers

Find the GCF by Prime Factoring	Reduce the Fraction by Prime Factoring
1. 8 and 12 $8 = 2 \cdot 2 \cdot 2$ $12 = 2 \cdot 2 \cdot 3$ $GCF = 2 \cdot 2 = 4$	$\frac{8}{12} = \frac{2 \cdot 2 \cdot 2}{2 \cdot 2 \cdot 3} = \frac{2}{3}$
2. 18 and 45 $18 = 2 \cdot 3 \cdot 3$ $45 = 3 \cdot 3 \cdot 5$ $GCF = 3 \cdot 3 = 9$	$\frac{18}{45} = \frac{2 \cdot 3 \cdot 3}{3 \cdot 3 \cdot 5} = \frac{2}{5}$
3. 42 and 70 $42 = 2 \cdot 3 \cdot 7$ $70 = 2 \cdot 5 \cdot 7$ $GCF = 2 \cdot 7 = 14$	$\frac{42}{70} = \frac{2 \cdot 3 \cdot 7}{2 \cdot 5 \cdot 7} = \frac{3}{5}$
4. 135 and 108 $135 = 3 \cdot 3 \cdot 3 \cdot 5$ $108 = 2 \cdot 2 \cdot 3 \cdot 3 \cdot 3$ $GCF = 3 \cdot 3 \cdot 3 = 27$	$\frac{108}{135} = \frac{3 \cdot 3 \cdot 3 \cdot 5}{2 \cdot 2 \cdot 3 \cdot 3 \cdot 3} = \frac{5}{2 \cdot 2} = \frac{5}{4}$
5. 756 and 360 $756 = 2 \cdot 2 \cdot 3 \cdot 3 \cdot 3 \cdot 7$ $360 = 2 \cdot 2 \cdot 2 \cdot 3 \cdot 3 \cdot 5$ $GCF = 2 \cdot 2 \cdot 3 \cdot 3 = 36$	$\frac{360}{756} = \frac{2 \cdot 2 \cdot 2 \cdot 3 \cdot 3 \cdot 5}{2 \cdot 2 \cdot 3 \cdot 3 \cdot 3 \cdot 7} = \frac{2 \cdot 5}{3 \cdot 7} = \frac{10}{21}$

Find the GCF by Prime Factoring	Reduce the Fraction by Prime Factoring
7. 210 and 350 $210 = 2 \cdot 3 \cdot 5 \cdot 7$ $350 = 2 \cdot 5 \cdot 5 \cdot 7$ $GCF = 2 \cdot 5 \cdot 7 = 70$	$\frac{210}{350} = \frac{2 \cdot 3 \cdot 5 \cdot 7}{2 \cdot 5 \cdot 5 \cdot 7} = \frac{3}{5}$
8. 66 and 110 $66 = 2 \cdot 3 \cdot 11$ $110 = 2 \cdot 5 \cdot 11$ $GCF = 2 \cdot 11 = 22$	$\frac{66}{110} = \frac{2 \cdot 3 \cdot 11}{2 \cdot 5 \cdot 11} = \frac{3}{5}$
9. 78 and 182 $78 = 2 \cdot 3 \cdot 13$ $182 = 2 \cdot 7 \cdot 13$ $GCF = 2 \cdot 13 = 26$	$\frac{78}{182} = \frac{2 \cdot 3 \cdot 13}{2 \cdot 7 \cdot 13} = \frac{3}{7}$
10. 240 and 280 $240 = 2 \cdot 2 \cdot 2 \cdot 2 \cdot 3 \cdot 5$ $280 = 2 \cdot 2 \cdot 2 \cdot 5 \cdot 7$ $GCF = 2 \cdot 2 \cdot 2 \cdot 5 = 40$	$\frac{240}{280} = \frac{2 \cdot 2 \cdot 2 \cdot 2 \cdot 3 \cdot 5}{2 \cdot 2 \cdot 2 \cdot 5 \cdot 7} = \frac{6}{7}$