

Multiply First

Multiply the fractions together first and then simplify the result.

$$1. \frac{3}{5} \cdot \frac{7}{6} = \frac{21 \div 3}{30 \div 3} = \frac{7}{10} \quad 2. -\frac{11}{2} \cdot \frac{4}{3} = -\frac{44 \div 2}{6 \div 2} = -\frac{22}{3} \quad 3. \left(-\frac{3}{8}\right) \cdot \left(-\frac{2}{9}\right) = \frac{6 \div 6}{72 \div 6} = \frac{1}{12}$$

$$4. -\frac{3}{1} \cdot \frac{1}{6}$$

$$-\frac{3}{1} \cdot \frac{1}{6} = -\frac{3}{6} = -\frac{1}{2}$$

$$5. \frac{1}{4} \cdot \frac{28}{1}$$

$$\frac{1}{4} \cdot \frac{28}{1} = \frac{28 \div 4}{4 \div 4} = \frac{7}{1} = 7$$

$$6. \frac{2}{3} \cdot \frac{5}{4} \cdot \frac{9}{10} = \frac{90}{120} = \frac{9}{12} = \frac{3}{4}$$

Cancel Common Factors First

Do the same problems by canceling common factors first and then multiplying.

$$7. \frac{\cancel{3}}{5} \cdot \frac{\cancel{7}}{\cancel{6}_2} = \frac{7}{10}$$

$$8. -\frac{\cancel{11}}{\cancel{2}_1} \cdot \frac{\cancel{4}^2}{3} = -\frac{22}{3}$$

$$9. \left(-\frac{\cancel{3}}{\cancel{8}_4}\right) \cdot \left(-\frac{\cancel{2}}{\cancel{9}_3}\right) = \frac{1}{12}$$

$$10. -\frac{\cancel{3}}{\cancel{1}_2} \cdot \frac{1}{6} = -\frac{1}{2}$$

$$11. \frac{1}{\cancel{4}_1} \cdot \frac{\cancel{28}^7}{1} = 7$$

$$12. \frac{\cancel{2}}{3} \cdot \frac{\cancel{5}}{\cancel{4}_2} \cdot \frac{\cancel{9}^3}{\cancel{10}_2} = \frac{3}{4}$$

Which method do you prefer and why?

Either way is fine but I recommend cross-canceling for larger numbers.

More Practice Multiplying Fractions

$$13. \frac{\overset{5}{\cancel{15}} \cdot \overset{1}{\cancel{9}}}{\underset{3}{4}} = \frac{5}{12}$$

$$14. \left(\frac{\overset{1}{\cancel{3}}}{\underset{1}{7}} \right) \left(\frac{\overset{2}{\cancel{14}}}{\underset{3}{9}} \right) = \frac{2}{3}$$

$$15. \frac{\overset{6}{\cancel{36}}}{\underset{9}{45}} \cdot \left(\frac{\overset{1}{\cancel{5}}}{\underset{1}{6}} \right) = -\frac{6}{9} = -\frac{1}{3}$$

$$16. -\frac{\overset{1}{\cancel{7}} \cdot \overset{1}{\cancel{2}}}{\underset{4}{8} \cdot \underset{3}{21}} = -\frac{1}{12}$$

$$17. \frac{11}{6} \cdot \frac{5}{3} = \frac{55}{18}$$

$$18. \left(-\frac{\overset{1}{\cancel{4}}}{\underset{7}{7}} \right) \cdot \left(-\frac{\overset{3}{\cancel{3}}}{\underset{2}{8}} \right) = \frac{3}{14}$$

$$19. -\frac{\overset{1}{\cancel{4}}}{\underset{1}{4}} \cdot \frac{1}{16} = -\frac{1}{4}$$

$$20. \frac{\overset{6}{\cancel{30}}}{\underset{1}{1}} \cdot \left(\frac{\overset{2}{\cancel{2}}}{\underset{5}{5}} \right) = \frac{12}{1} = 12$$

$$21. \frac{3}{8} \cdot \frac{\overset{3}{\cancel{24}}}{\underset{1}{1}} = \frac{9}{1} = 9$$

$$22. \frac{\overset{1}{\cancel{1}} \cdot \overset{2}{\cancel{2}} \cdot \overset{5}{\cancel{5}}}{\underset{1}{2} \cdot \underset{1}{5} \cdot \underset{3}{3}} = \frac{1}{3}$$

$$23. \left(-\frac{\overset{2}{\cancel{18}}}{\underset{1}{3}} \right) \cdot \frac{\overset{1}{\cancel{4}}}{\underset{1}{9}} \cdot \left(-\frac{\overset{1}{\cancel{3}}}{\underset{2}{8}} \right) = \frac{2}{2} = 1$$

$$-\frac{\overset{1}{\cancel{18}}}{\underset{3}{3}} \cdot \frac{\overset{1}{\cancel{4}}}{\underset{9}{9}} \cdot -\frac{\overset{1}{\cancel{3}}}{\underset{2}{8}} = \frac{1}{1} = 1$$

$$24. \left(-\frac{\overset{1}{\cancel{8}}}{\underset{4}{16}} \right) \cdot \left(-\frac{\overset{1}{\cancel{9}}}{\underset{7}{7}} \right) \cdot \left(-\frac{\overset{1}{\cancel{4}}}{\underset{3}{27}} \right) = -\frac{1}{28}$$