

KEY

FRACTIONS

MATH REVIEW 10/2014

PART ONE: Multiply the following pairs of fractions:

$$1) \frac{4}{5} \times \frac{4}{5} = \frac{16}{25}$$

$$5) \frac{3}{4} \times \frac{3}{4} = \frac{9}{16}$$

$$2) \frac{5}{6} \times \frac{1}{6} = \frac{5}{36}$$

$$6) \frac{2}{3} \times \frac{1}{3} = \frac{2}{9}$$

$$3) \frac{2}{8} \times \frac{7}{8} = \frac{14}{64} = \frac{7}{32}$$

$$7) \frac{2}{8} \times \frac{6}{8} = \frac{12}{64} = \frac{3}{16}$$

$$4) \frac{2}{3} \times \frac{2}{3} = \frac{4}{9}$$

$$8) \frac{4}{6} \times \frac{5}{6} = \frac{20}{36} = \frac{5}{9}$$

PART TWO: Divide the following pairs of fractions:

$$1) \frac{1}{2} \div \frac{2}{5} = \frac{1}{2} \times \frac{5}{2} = \frac{5}{4}$$

$$2) \frac{2}{7} \div \frac{3}{4} = \frac{2}{7} \times \frac{4}{3} = \frac{8}{21}$$

$$3) \frac{2}{3} \div \frac{3}{4} = \frac{2}{3} \times \frac{4}{3} = \frac{8}{9}$$

$$4) \frac{7}{9} \div \frac{1}{4} = \frac{7}{9} \times \frac{4}{1} = \frac{28}{9}$$

$$5) \frac{5}{6} \div \frac{1}{8} = \frac{5}{6} \times \frac{8}{1} = \frac{40}{6} = \frac{20}{3}$$

$$6) \frac{1}{4} \div \frac{1}{11} = \frac{1}{4} \times \frac{11}{1} = \frac{11}{4}$$

PART THREE: Reduce the following fractions, using prime factorization if necessary:

$$1) \frac{10}{20} = \frac{\cancel{2} \cdot \cancel{5}}{\cancel{2} \cdot \cancel{2} \cdot \cancel{5}} = \frac{1}{2}$$

$$2) \frac{20}{70} = \frac{\cancel{2} \cdot \cancel{2} \cdot \cancel{5}}{\cancel{2} \cdot \cancel{5} \cdot 7} = \frac{2}{7}$$

$$3) \frac{3}{12} = \frac{3}{\cancel{3} \cdot 2 \cdot 2} = \frac{1}{4}$$

$$4) \frac{4}{18} = \frac{\cancel{2} \cdot \cancel{2}}{\cancel{2} \cdot 3 \cdot 3} = \frac{2}{9}$$

$$5) \frac{16}{80} = \frac{\cancel{2} \cdot \cancel{2} \cdot \cancel{2}}{\cancel{2} \cdot \cancel{2} \cdot \cancel{2} \cdot 5} = \frac{1}{5}$$

$$6) \frac{40}{48} = \frac{\cancel{2} \cdot \cancel{2} \cdot 5}{\cancel{2} \cdot \cancel{2} \cdot 2 \cdot 3} = \frac{5}{6}$$

$$7) \frac{48}{54} = \frac{\cancel{2} \cdot \cancel{2} \cdot \cancel{2} \cdot \cancel{2} \cdot \cancel{3}}{\cancel{2} \cdot 3 \cdot 3 \cdot \cancel{3}} = \frac{8}{9}$$

$$8) \frac{6}{9} = \frac{\cancel{2} \cdot \cancel{3}}{\cancel{3} \cdot 3} = \frac{2}{3}$$