

Homework #2 - Multiplying and Dividing Fractions

Date _____ 5K _____

Multiply the fractions.

1) $\frac{5}{3} \times \frac{7}{8}$

$$= \frac{35}{24}$$

2) $\frac{5}{3} \times \frac{2}{5}$

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

3) $\frac{-2}{1} \times \frac{4}{5}$

$$= \frac{-8}{5}$$

4) $\frac{8}{7} \times \frac{3}{10}$

$$= \frac{12}{35}$$

5) $\frac{3}{5} \times -\frac{4}{3}$

$$= \frac{-12}{5}$$

6) $-\frac{2}{5} \times \frac{2}{3}$

$$= \frac{-4}{15}$$

7) $\frac{7}{6} \times \frac{5}{6} \times -\frac{3}{7}$

$$= \frac{-5}{12}$$

8) $-\frac{2}{1} \times -\frac{7}{10} \times -\frac{12}{13} \times -\frac{13}{9}$

$$= \frac{28}{15}$$

Divide the Fractions

9) $\frac{3}{2} \div \frac{9}{5}$

$$= \frac{3}{2} \times \frac{5}{9}$$

$$= \frac{5}{6}$$

10) $\frac{7}{8} \div \frac{-3}{2}$

$$= \frac{7}{8} \times \frac{-2}{3}$$

$$= \frac{-7}{12}$$

$$11) \frac{-1}{7} \div \frac{-4}{5}$$

$$= \frac{-1}{7} \times \frac{-5}{4} = \frac{5}{28}$$

$$12) \frac{5}{4} \div \frac{3}{4}$$

$$= \frac{5}{4} \times \frac{4}{3} = \frac{5}{3}$$

$$13) \frac{8}{5} \div \frac{-1}{5}$$

$$= \frac{8}{5} \times \frac{-5}{1} = \frac{-8}{1} = -8$$

$$14) \frac{-2}{1} \div \frac{-2}{3}$$

$$= \frac{-2}{1} \times \frac{-3}{2} = \frac{3}{1} = 3$$

$$15) \frac{12}{7} \div \frac{-8}{9}$$

$$= \frac{12}{7} \times \frac{-9}{8} = \frac{-27}{14}$$

$$16) 1 \div \frac{17}{10}$$

$$= \frac{1}{1} \times \frac{10}{17} = \frac{10}{17}$$

Evaluate each expression.

$$17) \frac{7}{4} \div \frac{8}{5} \times \frac{4}{3}$$

$$= \frac{7}{4} \times \frac{5}{8} \times \frac{4}{3} = \frac{35}{24}$$

$$18) \frac{7}{5} \times \frac{3}{4} \div \frac{1}{2}$$

$$= \frac{7}{5} \times \frac{3}{4} \times \frac{2}{1} = \frac{21}{10}$$

Application:

19) In 1993, about 6600 satellites were orbiting Earth. There were also about $\frac{25}{11}$ times that number of pieces of junk in orbit. The junk included used rockets and debris from explosions in space. About how many pieces of junk were orbiting the Earth?

$$\frac{6600}{1} \times \frac{25}{11} = 600 \times 25 = 15,000$$

∴ There are 15,000 pieces of junk in space.