

Homework #2 - Multiplying and Dividing Fractions

Date _____ 5K _____

Multiply the fractions.

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

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

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

$$= \frac{10}{15} = \frac{2}{3}$$

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

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

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

$$= \frac{24}{70} = \frac{12}{35}$$

5) $\frac{9}{5} \times -\frac{4}{3}$

$$= \frac{-36}{15} = \frac{-12}{5}$$

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

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

7) $\frac{7}{6} \times \frac{5}{6} \times -\frac{3}{7}$
$$\left(\frac{-105}{252} = -\frac{35}{84} = -\frac{5}{12} \right)$$

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

8) $-\frac{2}{1} \times -\frac{7}{10} \times -\frac{12}{13} \times -\frac{13}{9}$
$$= \frac{28}{15}$$

Divide the Fractions

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

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

$$= \frac{15}{18} = \frac{5}{6}$$

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

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

$$= \frac{-14}{24} = \frac{-7}{12}$$

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

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

$$= \frac{5}{28}$$

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

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

$$= \frac{20}{12} = \frac{5}{3}$$

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

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

$$= \frac{-40}{5} = -8$$

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

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

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

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

$$\frac{12}{7} \times \frac{-9}{8}$$

$$= \frac{-108}{56} = \frac{-27}{14}$$

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

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

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

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?

$$\frac{6600}{1} \times \frac{25}{11}$$

$$= 15000$$

\therefore There is 15000 pieces of junk