

# October 30, 2014<sup>1st</sup> 2<sup>nd</sup>

## Starter:

If people can only drive on days that the 3 digits on their car's license plate match the system below, what are the 3 digits on the plate of a car that can be driven every day of the week?

Sunday: each digit is less than 6

Monday: the 3-digit number is odd

Tuesday: the sum of the 3 digits is greater than 10

Wednesday: the 3-digit number is a multiple of 3

Thursday: the sum of the 3 digits is less than 15

Friday: at least 2 of the 3 digits are the same

Saturday: the 3-digit number is less than 500



# 10/30 Multiplying Rational Numbers - FRACTIONS!

## Method 1:

Multiply then simplify...

$$\frac{\cancel{5} \cdot \cancel{9}}{\cancel{6} \cdot \cancel{10}} = \frac{45}{60} \div 15 = \frac{3}{4}$$



## Method 2:

Simplify then multiply...

$$\frac{\overset{1}{\cancel{5}} \cdot \overset{3}{\cancel{9}}}{\underset{2}{\cancel{6}} \cdot \underset{2}{\cancel{10}}} = \frac{3}{4}$$

Cross-cancel



Multiply each... use either method.

$$\frac{2}{3} \cdot \frac{1}{4}$$
$$= \frac{2}{12}$$
$$= \frac{1}{6}$$

$$\frac{-4}{5} \cdot \frac{3}{5}$$
$$= \frac{-12}{25}$$

$$\frac{-3}{4} \cdot \frac{-5}{6}$$
$$= \frac{5}{8}$$



Multiply...

$$\begin{aligned} & \frac{-4 \cdot \frac{2}{3}}{1} \\ &= \frac{-8}{3} \\ &= -2\frac{2}{3} \end{aligned}$$

$$\begin{array}{r} 3 \overline{) 8} \\ \underline{6} \phantom{0} \\ 2 \phantom{0} \\ \underline{2} \phantom{0} \\ 0 \phantom{0} \end{array}$$



$$\begin{aligned} & \frac{-9}{\cancel{10}^5} \cdot \frac{-6}{\cancel{12}^1} \\ &= \frac{54}{5} \\ &= 10\frac{4}{5} \end{aligned}$$



## Multiplying Mixed Numbers...

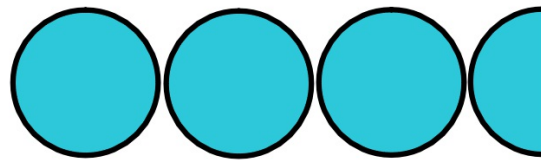
What is always the first step?

Mixed numbers need to be changed to improper fractions!!

Add

$$3\frac{1}{2} = \frac{7}{2}$$

Multiply




Multiply. Write answer in simplest form - ALWAYS!

$$\frac{23}{4} \cdot -3\frac{5}{6} \cdot 4\frac{4}{5}$$


$$= -\frac{23}{\cancel{4}} \cdot \frac{\cancel{4}}{5} \cdot \frac{24}{6}$$

$$= -\frac{92}{5}$$

$$= 18\frac{2}{5}$$


$$-2\frac{5}{8} \cdot -1\frac{5}{9}$$


$$= -\frac{\cancel{2}}{8} \cdot -\frac{\cancel{4}}{9}$$

$$= \frac{49}{12} = 4\frac{1}{12}$$


$$\left(1\frac{1}{2}\right)\left(1\frac{1}{3}\right)\left(1\frac{5}{6}\right)$$

$$= \frac{\cancel{2}}{\cancel{2}} \cdot \frac{\cancel{4}}{3} \cdot \frac{11}{\cancel{6}}$$

$$= \frac{11}{3}$$

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


$$\left(-2\frac{1}{4}\right)\left(3\frac{5}{9}\right)\left(-4\frac{1}{6}\right)$$

$$= -\frac{\cancel{4}}{\cancel{4}} \cdot \frac{\cancel{4}}{9} \cdot \frac{-25}{\cancel{6}}$$

$$= \frac{100}{3}$$

$$= 33\frac{1}{3}$$

**Homework**

Gold WST

**Due** Monday