NAME _____

Lesson 5.2 Adding Fractions with Unlike Denominators

$$\begin{array}{rcl} \frac{1}{7} \times \frac{3}{3} & = & \frac{3}{21} \\ + \frac{2}{3} \times \frac{7}{7} & = & + \frac{14}{21} \\ \hline & & \frac{17}{21} \end{array}$$

$$\begin{array}{rcl} \frac{6}{7} \times \frac{3}{3} & = & \frac{18}{21} \\ + \frac{2}{3} \times \frac{7}{7} & = & + \frac{14}{21} \\ \hline & & \frac{32}{21} = 1\frac{11}{21} \end{array}$$

To add fractions, the denominators must be the same. When you have unlike denominators, find the least common multiple (LCM) and rename the fractions.

In the example, the denominators are 3 and 7, so find the LCM of 3 and 7.

Multiples of 3: 3, 6, 9, 12, 15, 18, 21, 24
Multiples of 7: 7, 14, 21, 28

The least common multiple of 3 and 7 is 21. To change each fraction so it has the same denominator, multiply both the numerator and denominator by the same number.

If necessary, change improper fractions to mixed numerals in simplest form.

Add each fraction. Write answers in simplest form.

	a	b	c	d	e
1.	$\frac{3}{5} + \frac{1}{4}$	$\frac{2}{3} + \frac{2}{7}$	$\frac{1}{5} + \frac{1}{7}$	$\frac{3}{8} + \frac{1}{6}$	$\frac{1}{2} + \frac{1}{3}$
2.	$\frac{2}{9} + \frac{5}{8}$	$\frac{6}{7} + \frac{1}{3}$	$\frac{2}{5} + \frac{5}{7}$	$\frac{7}{10} + \frac{1}{3}$	$\frac{3}{7} + \frac{1}{8}$
3.	$\frac{2}{3} + \frac{1}{5}$	$\frac{4}{7} + \frac{5}{9}$	$\frac{3}{4} + \frac{3}{10}$	$\frac{7}{8} + \frac{2}{5}$	$\frac{8}{9} + \frac{6}{7}$