GRADE 10 ESSENTIAL
UNIT X – PRIOR STUDIES
FRACTIONS: *ADD* **MIXED NUMBERS**
(subtraction has one extra consideration)

Name:_____
Date: _____

Addition (fractions/mixed numbers)

$$3\frac{1}{2} \longrightarrow 3\frac{4}{8}$$
$$+1\frac{1}{8} \longrightarrow +1\frac{1}{8}$$
$$\overline{\qquad\qquad 4\frac{5}{8}}$$

Rename the numbers so the fractions have the same denominators
Add the fractions.
Add the whole numbers.

$$1\frac{1}{2} \longrightarrow 1\frac{6}{12}$$
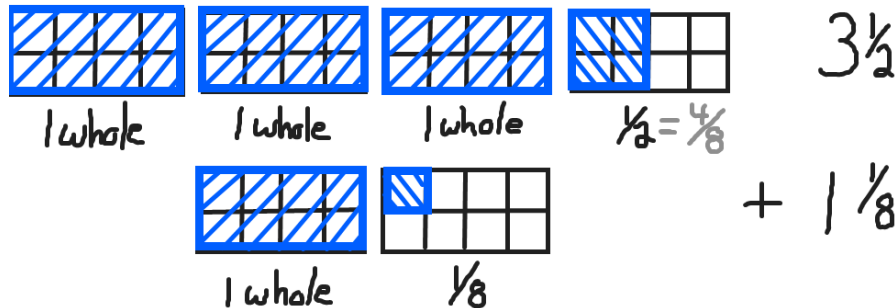$$3\frac{3}{4} \longrightarrow 3\frac{9}{12}$$
$$+\frac{2}{3} \longrightarrow +\frac{8}{12}$$

Change to simplest form.

$$4\frac{23}{12} = 5\frac{11}{12}$$

Same as previous lessons, but just need to add the whole parts and the fraction parts separately. *If* adding the fraction parts makes another whole part *then* 'carry'.

Chocolate bars

1 whole   1 whole   1 whole $\frac{1}{2}=\frac{4}{8}$

1 whole $\frac{1}{8}$

$3\frac{1}{2}$

$+ 1\frac{1}{8}$

Write each answer in simplest form.

	a	b	c	d
1.	$3\frac{1}{4}$	$3\frac{1}{6}$	$5\frac{1}{2}$ $5\frac{4}{8}$	$3\frac{11}{12}$
	$+2\frac{4}{5}$	$+\frac{3}{4}$	$+1\frac{5}{8}$ $+1\frac{5}{8}$	$+\frac{5}{6}$
			$6\frac{9}{8}=7\frac{1}{8}$	

LCM: 8

or horizontally: $3\frac{1}{4} + 2\frac{4}{5} = 3 + \frac{1}{4} + 2 + \frac{4}{5} = 5 + \frac{5}{20} + \frac{16}{20} = 5 + \frac{21}{20} = \mathbf{6\frac{1}{20}}$

2.

$$9\frac{7}{8}$$
$$+\frac{3}{4}$$

$$7\frac{2}{5}$$
$$+4\frac{3}{10}$$

$$\frac{3}{5}$$
$$+2\frac{5}{6}$$

$$\frac{9}{10}$$
$$+3\frac{5}{6}$$

3.

$$6\frac{2}{3}$$
$$1\frac{3}{4}$$
$$+\frac{1}{6}$$

$$2\frac{1}{5}$$
$$2\frac{1}{4}$$
$$+1\frac{1}{2}$$

$$3\frac{1}{3}$$
$$\frac{5}{6}$$
$$+3\frac{7}{12}$$

$$\frac{1}{2}$$
$$5\frac{1}{5}$$
$$+1\frac{3}{10}$$

4.

$$\frac{3}{5}$$
$$1\frac{2}{3}$$
$$+2\frac{1}{2}$$

$$3\frac{5}{8}$$
$$2\frac{1}{6}$$
$$+\frac{5}{12}$$

$$\frac{1}{4}$$
$$1\frac{1}{2}$$
$$+4\frac{7}{8}$$

$$2\frac{2}{3}$$
$$2\frac{1}{2}$$
$$+3\frac{2}{5}$$

ALTERNATE METHOD TO ADD MIXED NUMBERS
Just convert mixed numbers into pure 'improper' fractions, find a common denominator, and add.

$$7\frac{2}{5} + 4\frac{3}{10} = \frac{37}{5} + \frac{43}{10} = \frac{74}{10} + \frac{43}{10} = \frac{117}{10} = 11\frac{7}{10}$$

the numerator can get large in value if you have a lot of whole amounts!

Subtraction will be pretty much the same as adding *except*(!) you may have to '*borrow*' from a whole!