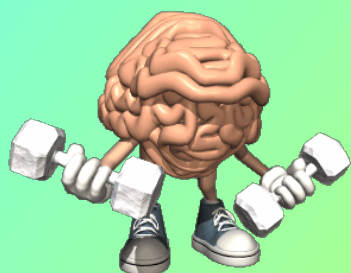# Curriculum Outcome

N1: Demonstrate an understanding of rational numbers by: comparing and ordering rational numbers; solving problems that involve arithmetic operations on rational numbers.

Student Friendly:
"Adding Fractions and Adding Decimals"

Warm Up

1) Identify wether the number is rational or non-rational

rat	rat	Not rat	rat
$\dfrac{2}{3}$	$1.\overline{66}$	1.234567.....	-2.25
Q	Q	Q̄	Q

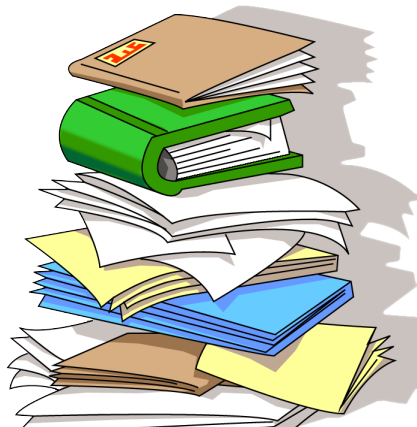2) Express each fraction as a decimal

a) $\dfrac{4}{5}$

= 0.8

b) $\dfrac{9}{6}$

= 1.5

c) $\dfrac{3}{11}$

= 0.$\overline{27}$

Questions from yesterday's homework ⭐?

Homework

Page 101-103
Questions:
5, 6, 7, 12aceh. 13,
14aceg,16bf,17ac,
21,23ad,24ac

3.2 Adding Rational Numbers

Addition of Integers

Copy Down

If the signs are the **same**:

Keep the same sign, and ADD.

$$(-4)+(-2)=-6$$

If the signs are **different**:

Cover up the signs
Find the biggest number
Take the sign of the BIGGEST number,

$$(-8)+(2)=-6$$

Eight is bigger than 2, when you don't look at the negative sign.

We use the same rules with decimals:

1) (-2.1) + (-1.7) = ___(–)___

If you use a calculator, make sure you know how to input negative numbers!

2) (-6.8) + 1.5 = ___(-)___

3) (-7.1) + 12.3 = ___(+)___

Adding Fractions

When adding fractions you need a COMMON DENOMINATOR:

1) $\dfrac{-5}{8} + \dfrac{6}{8}$

$= \dfrac{1}{8}$

2) $\dfrac{-8}{7} + \dfrac{-4}{7}$

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

$$\frac{3}{5} + \frac{4}{-5}$$

$$\frac{3}{5} + \frac{-4}{5}$$

Always
want
(-) on
the top

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

What happens if the denominators are different?

Find a Common Denominator by determining the LCM.

L owest

C ommon

M ultiple

$$\frac{3}{4} + \frac{-5}{6}$$

Find the LCM first!

$$= \frac{9}{12} + \frac{-10}{12}$$

$\times 3$ $\times 2$ $\times 2$

4,8,12,16,
6,12,18

$$= \frac{-1}{12}$$

You try:

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

5,10,15,20,25,30,35

6,12,18,24,30

×6   × 5

$$= \frac{18}{30} + \frac{5}{30}$$

$$= \frac{23}{30}$$

What about mixed numbers?

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

Option 1

Step 1: Write each mixed number as an improper fraction.
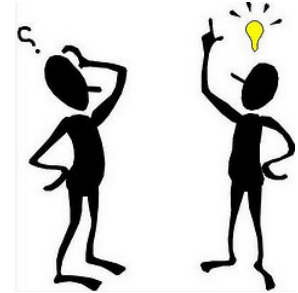
$$\frac{7}{3} + \frac{13}{5}$$

×5   x 3

Step 2: Find a common denominator, and then add numerators.

$$\frac{35}{15} + \frac{39}{15}$$

$$= \frac{74}{15}$$

$$= 4\frac{14}{15}$$

You try!

1) $5\frac{7}{8} + \left(-3\frac{1}{2}\right)$

$$= \frac{47}{8} + \frac{-7}{2}$$

×4

$$= \frac{47}{8} + \frac{-28}{8}$$

$$= \frac{19}{8}$$

$$= 2\frac{3}{8}$$

You try!

$$2) \left(-1\frac{2}{3}\right) + \left(-2\frac{1}{4}\right)$$

$$= \frac{-5}{3} + \frac{-9}{4}$$

$\times 4$ $\times 3$

$$= \frac{-20}{12} + \frac{-27}{12}$$

$$= \frac{-47}{12}$$

$$= -3\frac{11}{12}$$

Class/Homework

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Don't just give answers copy down the addition
statement (Not directions)

NO Number lines

8 (all) Leave in fractional form (no calculator)

9 (acf) Use Calculators