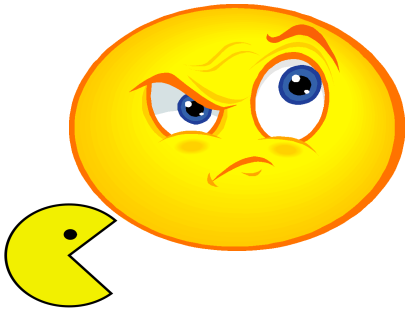
Grade 9 Warm Up



Put the following fractions in order from least to greatest.

1)

$$\frac{-11}{15}, \frac{-2}{7}, \frac{-21}{22}, \frac{-1}{5}, \frac{-1}{10}$$

-0.733..., -0.285714.., -0.954545.., -0.2, -0.1

$\frac{-21}{22}$ $\frac{-11}{15}$ $\frac{-2}{7}$ $\frac{-1}{5}$ $\frac{-1}{10}$

Grade 9 Warm Up

Determine each sum.

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

$-\frac{25}{30} + \frac{-12}{30} = -\frac{37}{30} = -1\frac{7}{30}$

2) $\frac{8}{3} + \frac{5}{4}$

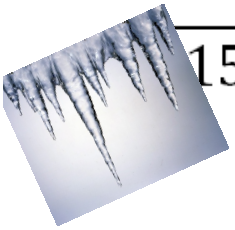
$\frac{32}{12} + \frac{15}{12} = \frac{47}{12} = 3\frac{11}{12}$

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

$-\frac{10}{15} + \frac{3}{15} = \frac{-13}{15} + 4 = -4\frac{13}{15}$

Put the following fractions in order from least to greatest.

$$\frac{-11}{15}, \frac{-2}{7}, \frac{-21}{22}, \frac{-1}{5}, \frac{-1}{10}$$



4) On December 18th, the temperature in Miramichi was -21.6°C. By noon the next day, the temperature increased by 3.7°C.

$-21.6 + 3.7°C$

$-17.9°C$

a) What was the temperature at noon on December 19th?

b) On December 17th, the temperature was 2.1°C less than (colder than) that of December 18th. What was the temperature on the 17th?

$-21.6 - 2.1°C$

$-23.7°C$

Any Homework Questions?

p. 112 - 113

11(acegi) (Without calculator)

13, 16, 17, 18, 19(a, c), 20(ac)

Section 3.3

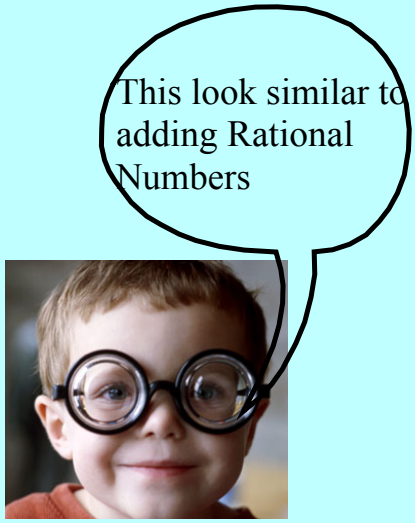
Subtracting Rational Numbers

When subtracting Rational Numbers you must have a ...

Common Denominator

Ex) $\frac{13}{7} - \frac{4}{7} = \frac{9}{7}$

Same Denominators



You try ...

(Remember to write all solution in simplest form)

1) $\frac{21}{2} - \frac{24}{2}$

$-\frac{3}{2}$

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

2) $\frac{-25}{13} - \frac{16}{13}$

$-\frac{41}{13}$

$-3\frac{2}{13}$

3) $\frac{11}{4} - \frac{5}{4}$

$\frac{6 \div 2}{4 \div 2}$

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

Oh, what to do when the denominators are different???

I Know this one!!!!

When denominators are different you have to find a **"common denominator"**

How 

By determining the LCM

Lowest Common Multiple

(of the denominators)

Subtract the following rational numbers

$\frac{13}{7} - \frac{4}{3}$

Look at the multiples of each denominator 18, 21

Find the LCM

7 14, 21, 28 3, 6, 9, 12, 15

$\frac{39}{21} - \frac{28}{21}$

$\frac{11}{21}$

You try...

1) $\frac{17}{12} - \frac{4}{9}$

$\frac{51}{36} - \frac{16}{36}$

$\frac{35}{36}$

3) $\frac{-2}{7} - \frac{5}{28}$ (×4 ×4)

$\frac{-8}{28} - \frac{5}{28}$

$\frac{-13}{28}$

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

$\frac{11}{5} - \frac{5}{1} + \frac{2}{3}$

$\frac{33}{15} - \frac{75}{15} + \frac{10}{15}$

$\frac{-32}{15}$

$-2\frac{2}{15}$

Subtracting Negative Numbers

$8 - (-2)$ ⟶ We add the opposite: $8 + 2 =$

No difference with rational numbers

$\frac{6}{5} - \left(\frac{-10}{5}\right)$ ⟶ We add the opposite: $\frac{6}{5} + \frac{10}{5} =$

Subtracting Rational Numbers in Mixed Number Form

$$3\frac{1}{5} - 2\frac{7}{10}$$

STEP 1) Write each mixed number as an inproper fraction

$\frac{16}{5} \quad \frac{27}{10}$ (×2)

STEP 2) Find common denominators and then subtract like before

$\frac{32}{10} - \frac{27}{10}$

$\frac{5}{10}$

STEP 3) Reduce all fractions

$\frac{1}{2}$

Your Turn

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

2) $6\frac{1}{2} - 3\frac{1}{7}$

Page 119

6 , 7ace, 8

Class/Homework