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:
“BEDMAS with fractions and decimals"

Do we need a warm-up?

$10 \times 3 - 6.5 \div 10 - 1.3$

28.05

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

$\frac{251}{150}$ or $1\frac{101}{150}$

$$10 \times 3 - 6.5 \div 10 - 1.3$$

$$30 - 6.5 \div 10 - 1.3$$

$$30 - 0.65 - 1.3$$

$$= 28.05$$

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

$$\frac{11}{6} - \left[\frac{2}{3} \times \frac{3}{5}\right]^2$$

$$\frac{11}{6} - \left[\frac{2}{1} \times \frac{1}{5}\right]^2$$

$$\frac{11}{6} - \left[\frac{2}{5}\right]^2$$

$$\frac{11}{6} - \frac{4}{25}$$

$\times 25$ $\times 6$

$$\frac{275}{150} - \frac{24}{150}$$

$$= \frac{251}{150}$$

$$1\ \frac{101}{150}$$

4.

$$\frac{\left(-\frac{1}{2}\right)^2-\left(-\frac{2}{3}\right)}{\left[\frac{1}{3}+\left(-\frac{3}{12}\right)\right]}$$

Top:

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

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

$\frac{3}{12}+\left(\frac{+8}{12}\right)$

$=\frac{11}{12}$

Bottom

$\frac{1}{3}+\frac{-3}{12}$

$\frac{4}{12}+\frac{-3}{12}$

$\frac{1}{12}$

$\frac{\text{Top}}{\text{bottom}}=\frac{\frac{11}{12}}{\frac{1}{12}}=\frac{11}{12}\div\frac{1}{12}$

$=\frac{11}{12}\times\frac{12}{1}$

$=\frac{11}{1}$

$=11$

Hints for TEST:

Subtracting a Negative

-add the opposite

$-8 - (-5)$

$= -8 + 5$

$= -3$

To add and subtract fractions you need common denominators

1) $\frac{-1}{4} + \frac{5}{7}$

$= \frac{-7}{28} + \frac{20}{28}$

$= \frac{13}{28}$

ALWAYS REDUCE WHEN POSSIBLE

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

$= \frac{-7}{3} - \frac{17}{5}$

$= \frac{-35}{15} - \frac{51}{15}$

$= \frac{-86}{15}$

$= -5\frac{11}{15}$

Hints for TEST:

To Multiply fractions: $\frac{\text{top x top}}{\text{bottom x bottom}}$

DO NOT use COMMON DENOMINATORS

1) $\frac{-1}{3} \times \frac{6}{5}$

$= \frac{(-1 \times 6)}{(3 \times 5)}$ Simplify

$= \frac{(-1 \times 2)}{(1 \times 5)}$

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

ALWAYS REDUCE WHEN POSSIBLE

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

$= \frac{7}{3} \times \frac{-12}{5}$ Simplify

$= \frac{(7 \times -4)}{(1 \times 5)}$

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

Question was in mixed so answer should be in mixed

$= -5\frac{3}{5}$

To DIVIDING fractions: FLIP AND MULTIPLY

DO NOT use COMMON DENOMINATORS

1) $\frac{-2}{7} \div \frac{3}{10}$ FLIP

$= \frac{-2}{7} \times \frac{10}{3}$

$= \frac{(-2 \times 10)}{(7 \times 3)}$ Simplify if possible

$= \frac{-20}{21}$

ALWAYS REDUCE WHEN POSSIBLE

2) $5\frac{1}{4} \div -1\frac{2}{3}$ FLIP

$= \frac{21}{4} \div \frac{-5}{3}$

$= \frac{21}{4} \times \frac{-3}{5}$ Simplify if possible

$= \frac{(21 \times -3)}{(4 \times 5)}$

$= \frac{-63}{20}$

Question was in mixed so answer should be in mixed

$= -3\frac{3}{20}$

Hints for TEST:

as they appear

B	E	D	M	A	S
r	x	i	u	d	u
a	p	v	l	d	b
c	o	s	t		t
k	n	i	i		r
e	e	d	p		a
t	n	e	l		c
	t		y		t

Example

$$\left(\frac{2}{5}\right)^2 \div \left(\frac{2}{3} + \frac{4}{5}\right)$$

$$= \left(\frac{2}{5}\right)^2 \div \left(\frac{10}{15} + \frac{12}{15}\right)$$

$$= \left(\frac{2}{5}\right)^2 \div \left(\frac{22}{15}\right)$$

$$= \left(\frac{4}{25}\right) \div \left(\frac{22}{15}\right)$$

$$= \left(\frac{4}{25}\right) \times \left(\frac{15}{22}\right)$$ Simplify

$$= \left(\frac{2}{5}\right) \times \left(\frac{3}{11}\right)$$

$$= \left(\frac{6}{55}\right)$$

$$\frac{(3.2 + 4.5)^2 - (-2.8 - 5.3)}{[(1.5) \times 3.2] + [4.5 \div (0.9)]}$$

Top:

$(3.2 + 4.5)^2 - (-2.8 - 5.3)$

$(7.7)^2 - (-8.1)$

$59.29 + 8.1$

67.39

Bottom:

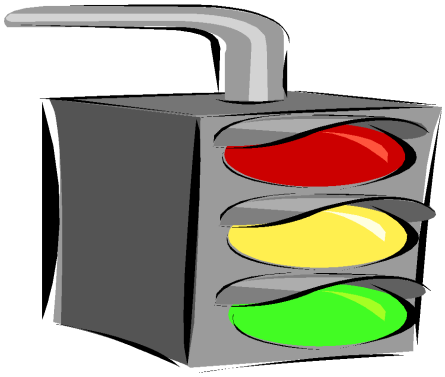
$[(1.5) \times 3.2] + [4.5 \div (0.9)]$

$[\ 4.8\ ] + [\ 5\ ]$

9.8

$$\frac{\text{Top}}{\text{Bottom}} = \frac{67.39}{9.8}$$

$$= 6.9$$



Class / Homework

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Worksheets