Sept. 7, 2017

Warmup

a) $-\frac{2}{3} \times \frac{2}{5} \div \frac{3}{7}$

$= -\frac{4}{15} \div \frac{3}{7}$

$= -\frac{4}{15} \cdot \frac{7}{3} = \boxed{-\frac{28}{45}}$

g) $\frac{18}{13} - 3\frac{1}{3}$

$= \frac{18}{13} - \frac{10}{3}$ (×3, ×13)

$= \frac{54}{39} - \frac{130}{39}$

$= \boxed{-\frac{76}{39}} = \boxed{-1\frac{37}{39}}$

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$$-2\frac{1}{3} \times -\frac{5}{6} \div \frac{2}{3} \times \frac{3}{-8}$$

$$\equiv$$

$$\left(-\frac{7}{3}\right) \times \left(-\frac{5}{6}\right) \times \frac{3}{2} \times \frac{3}{-8}$$

$$= \frac{-315}{288} = \frac{-105}{96} = \boxed{\frac{-35}{32}}$$

The Rest of the Unit

Fri: work period (Choice #1)

Mon: review / work period

Tues: Test #1, Choice #1 due

Sept. 7, 2017

BEDMAS

This is for order of operations. All math questions use BEDMAS.

Brackets

Exponents

- Division
- Multiplication

- Addition
- Subtraction

Ex. 1

a) -4^2 $\quad (-4)^2$

* -16

b) $(-2+3\underline{-2\times 8})^2$

$=(-2+3-16)^2$

$=(1-16)^2$

$= (-15)^2$

$= \boxed{+225}$

c) $(6 \times 8 - 3 \times 4)^2$

$= (48 - 12)^2$

$= (36)^2$

$= \boxed{1296}$

d) $(2+(3\times(4+(-2\times3)^2)))+1$

(*)

$=(2+(3\times(4+(-6)^2)))+1$

$=(2+(3\times(4+36)))+1$

$=(2+(3\times40))+1$

$$= (2 + 120) + 1$$

$$= 122 + 1$$

$$= \boxed{123}$$

e) $\frac{2}{3} + \frac{3}{4} \div \frac{4}{5}$

$= \frac{2}{3} + \frac{3}{4} \cdot \frac{5}{4}$

$= \frac{2}{3} + \frac{15}{16}$ (×16 on $\frac{2}{3}$, ×3 on $\frac{15}{16}$)

$= \frac{32}{48} + \frac{45}{48}$

$= \frac{77}{48}$

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

$= \left(-\frac{2}{3}\right) \cdot \left(-\frac{2}{3}\right)$

$= \boxed{\frac{4}{9}}$

g) $\frac{3}{4} \cdot \frac{-1}{6} + \frac{1}{2} \div \frac{3}{2}$

$= \frac{-3}{24} + \frac{1}{2} \cdot \frac{2}{3}$

$= \frac{-1}{8} + \frac{2}{6}$

$= \frac{-1}{8} + \frac{1}{3}$

$$= \frac{-3}{24} + \frac{8}{24}$$

$$= \boxed{\frac{5}{24}}$$

h) $\left[\left(\frac{1}{3}+\frac{1}{4}\right)\div\left(\frac{2}{3}+\frac{4}{5}\right)\right]^2$

$=\left[\left(\frac{4}{12}+\frac{3}{12}\right)\div\left(\frac{10}{15}+\frac{12}{15}\right)\right]^2$

$=\left[\frac{7}{12}\cdot\frac{22}{15}\right]^2$

$$= \left[\frac{7}{12} \cdot \frac{15}{22} \right]^2$$

$$= \left[\frac{105}{264} \right]^2$$

$$= \left[\frac{35}{88} \right]^2$$

$$= \frac{1225}{7744}$$

i) $\left(\frac{3}{4}+\frac{1}{2}\right)^2-\left(\frac{4}{7}\div\frac{3}{7}+1\right)^2$

$=\left(\frac{6}{8}+\frac{4}{8}\right)^2-\left(\frac{4}{7}\cdot\frac{7}{3}+1\right)^2$

$=\left(\frac{10}{8}\right)^2-\left(\frac{28}{21}+1\right)^2$

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

$$= \left(\frac{5}{4}\right)^2 - \left(\frac{7}{3}\right)^2$$

$$= \frac{25}{16} - \frac{49}{9}$$

$$= \frac{225}{144} - \frac{784}{144}$$

$$= -\frac{541}{144}$$

p. 5 #7-9