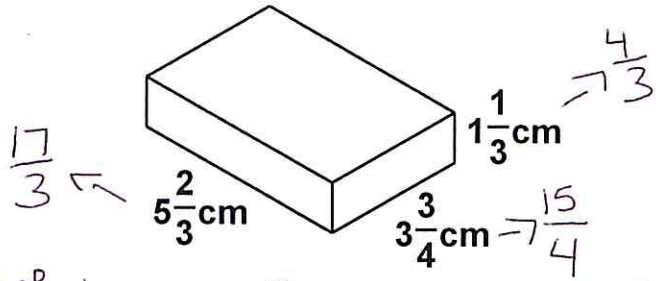
NAME: _____ DATE: _____ HOUR: _____

Fractions and Substitution Test

DIRECTIONS: Calculate the volume and surface area of the following prism.



$\frac{17}{3}$ $\frac{4}{3}$ $\frac{15}{4}$

$V = lwh$ so,

$V = \frac{17}{3} \cdot \frac{15}{4} \cdot \frac{4}{3} = \frac{1,020}{36}$

$1020 \div 36 = 28.\overline{3}$

$\frac{1020}{36} = 28\frac{12}{36} \div \frac{12}{12} = 28\frac{1}{3}$

Volume= $28.\overline{3}\,cm^3$ or $28\frac{1}{3}cm^3$

$SA = 2lh + 2wh + 2lw$

$SA = \frac{2}{1} \cdot \frac{17}{3} \cdot \frac{4}{3} + \frac{2}{1} \cdot \frac{15}{4} \cdot \frac{4}{3} + \frac{2}{1} \cdot \frac{17}{3} \cdot \frac{15}{4}$

$SA = \frac{136}{9} + \frac{120}{12} + \frac{510}{12}$

$SA = \frac{544}{36} + \frac{360}{36} + \frac{1530}{36}$

$SA = \frac{2434}{36}$ $2434 \div 36 = 67.6\overline{1}$

$SA = 67\frac{22}{36} \div \frac{2}{2} = 67\frac{11}{18}$

Surface Area= $67\frac{11}{18}cm^2$ or $67.6\overline{1}\,cm^2$

DIRECTIONS: Calculate the following:

$3\frac{1}{5} - 2\frac{1}{5} = 1\frac{0}{5} = 1$

$2\frac{1}{3} + 3\frac{2}{6}$ LCM = 6

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

$5\frac{4}{6}$ Simplify by $\frac{2}{2}$

$5\frac{4}{6} \div \frac{2}{2} = 5\frac{2}{3}$

$\frac{4}{5}(1\frac{1}{2})$

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

$\frac{4}{5} \cdot \frac{3}{2} = \frac{12}{10} = 1\frac{2}{10} \div \frac{2}{2} = 1\frac{1}{5}$

DIRECTIONS: Evaluate where x=6.

$2x-4$

$2 \cdot 6 - 4$

$12 - 4$

8

$\frac{x}{2}$

$\frac{6}{2}$

3

$x^2 - \frac{(2x)}{3}$

$6^2 - \frac{(2 \cdot 6)}{3}$

$6^2 - \frac{12}{3}$

$6^2 - 4$

$36 - 4 = 32$