Name: Farah

Date: 10/2/20

Course: _____

Nyack College

FRACTIONS OPERATIONS ASSESSMENT

Directions: Provide complete responses to each question. Make sure to show your work.

Fractions

1. Complete the addition operation for the following expressions:

a. $\frac{1}{6} + \frac{1}{5}$ (5) (6) = $\frac{11}{30}$

b. $\frac{2}{10}$ (9) $+ \frac{9}{15}$ (3) (3)

$\frac{10}{45} + \frac{27}{45} = \frac{37}{45}$

c. $\frac{1}{9}$ (7) $+ \frac{1}{7}$ (9) (7) (9)

$\frac{7}{63} + \frac{9}{63} = \frac{16}{63}$

d. $2\frac{1}{9} + 1\frac{1}{3}$

$\frac{19}{9}$ (3) $+ \frac{4}{3}$ (9) (9) $= \frac{93}{27} = 3\frac{4}{9}$

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2. Complete the subtraction operation for the following expressions:

a. $\frac{3}{5} + \frac{1}{5} = \frac{4}{5}$

b. $\frac{7}{10} - \frac{9}{11}$ $\frac{(7 \times 11) + (9 \times 10)}{10 \times 11}$ $\frac{77 + 90}{110} = \frac{167}{110}$

$1\frac{57}{110}$

c. $\frac{1}{9} - \frac{1}{11}$ $\frac{(11) + (9)}{99} = \frac{20}{99}$

$\frac{20}{99}$

d. $2\frac{1}{7} - 1\frac{1}{12}$ $\frac{12}{84} + \frac{7}{84} = 3\frac{19}{84}$

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3. Complete the multiplication operation for the following expressions:

a. $\frac{3}{5} \times \frac{1}{15}$ $= \frac{3}{75} \div 3 \div 3 = \frac{1}{25}$

b. $\frac{4}{12} \times \frac{9}{16} = \frac{36 \div 12}{192 \div 12} = \frac{3}{16}$

c. $\frac{15}{6} \times \frac{18}{10} = \frac{270}{60} \div \frac{30}{30} = \frac{9}{2} = 4\frac{1}{2}$

d. $4\frac{1}{12} \times 2\frac{1}{3}$

$9\frac{19}{36}$

$\frac{49}{12} \times \frac{7}{3} = \frac{343}{36}$

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4. Complete the division operation for the following expressions:

a. $\frac{3}{12} \div \frac{1}{6}$ $= \frac{18 \div 6}{12 \div 6} = \frac{3}{2} = 1\frac{1}{2}$

b. $\frac{6}{25} \div \frac{9}{10}$ $= \frac{60 \div 15}{225 \div 15} = \frac{4}{15}$

c. $\frac{6}{28} \div \frac{12}{7}$ $= \frac{42 \div 42}{336 \div 42} = \frac{1}{8}$

d. $\frac{36}{4} \div \frac{18}{32}$ $\frac{36 \times 32}{4 \times 18} = \frac{1152}{72} = 16$

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5. Simplify the expressions:

a. $\left(\frac{4}{3}-\frac{1}{3}\right)\div\frac{3}{4}$

$1 \div \frac{3}{4}$

$1\frac{3}{4}$

b. $\left(\frac{5}{4}\times\frac{10}{3}\right)^2-\frac{7}{12}$

$\frac{40^2}{15} - \frac{7}{12}$

$1,600$