Rationals Review

-0.571

Due online [34 marks]

Submit all final answers online. This is due by 11:59 PM on the day before Lesson 15.

Due in class [14 marks]

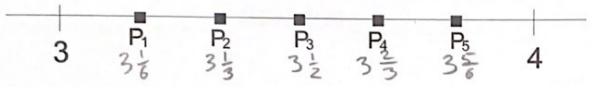
Show all work for questions 4c, 4f, and 5 on lined paper. This is due in class during Lesson 15.

1. On this sheet use the correct symbol for each pair to show which is larger.

a) $\frac{7}{11} > \frac{5}{8}$ **b)** $-\frac{4}{7} > -\frac{7}{12}$

2. Label the indicated points on each number line below and indicate the D or d, when asked.

a)



D = 1 d = 1/6

b)

D = 12 23/24 d = 2 71/120

c)

D = _____ d = _____

3. Order these rational numbers from least to greatest in the boxes.

a) $\frac{7}{12}, \frac{4}{5}, \frac{5}{6}, \frac{4}{7}, \frac{8}{11}, \frac{2}{3}$ (0.583 0.8 0.83 0.57 72 66)

4/7, 7/12, 2/3, 8/11, 4/5, 5/6

b) $\frac{1}{5}, -\frac{9}{10}, -\frac{7}{8}, \frac{1}{4}, \frac{8}{33}, -\frac{6}{7}, \frac{2}{11}, -\frac{31}{33}, -\frac{3}{5}, \frac{2}{9}$ (2 -9 -875 25 2424 -85 18 -93 -6 2)

$-\frac{31}{33}, -\frac{9}{10}, -\frac{7}{8}, -\frac{6}{7}, -\frac{3}{5}, \frac{1}{5}, \frac{2}{9}, \frac{8}{33}, \frac{1}{4}$

c) $0.2753\overline{53}, 0.\overline{275}, 0.2753\overline{53}, 0.\overline{275}, 0.\overline{2753}, 0.\overline{27}$ (5 2 4 6 3 1)

$0.\overline{27}, 0.\overline{275}, 0.\overline{2753}, 0.2753\overline{53}, 0.27\overline{5375}, 0.\overline{275}$

4. Calculate each of the following and show all your work on lined paper.

a) $\frac{-17}{-28} - \frac{-41}{42}$

b) $-2\frac{4}{33} \times \frac{-1}{30} \times 3\frac{3}{21} \times 1\frac{9}{26} \times \left(-3\frac{12}{35}\right)$

c) $-486\frac{2}{2541} - \left(-473\frac{1413}{1694}\right)$

d) $5\frac{3}{26} \div \left(-5\frac{8}{187}\right) \times 5\frac{4}{33} \div \left(-1\frac{604}{943}\right)$

e) $5037\frac{25}{693} - 6812\frac{79}{126}$

f) $\frac{133}{442} \div \left(-9\frac{14}{91}\right) \times 187 \div \frac{-57}{289} \times \frac{-23}{-1265}$

g) $-6315\frac{2267}{4620} - \left(-9898\frac{167}{6930}\right) + \left(-3577\frac{13}{2310}\right)$

5. Calculate and show all your work on lined paper: $\frac{3}{8} - \frac{1-\frac{16}{39}}{1-\frac{3}{\frac{2}{3}+\frac{1}{4-1\frac{3}{5}}}}$ -3

5) i) $4 - 1\frac{3}{5}$

$= \frac{20}{5} - \frac{8}{5}$

$= \frac{12}{5}$

ii) $1 \div \frac{12}{5}$

$= 1 \times \frac{5}{12}$

$= \frac{5}{12}$

iii) $\frac{2}{3} + \frac{5}{12}$

$= \frac{8}{12} + \frac{5}{12}$

$= \frac{13}{12}$

iv) $3 \div \frac{13}{12}$

$= 3 \times \frac{12}{13}$

$= \frac{36}{13}$

v) $1 - \frac{36}{13}$

$= \frac{13}{13} - \frac{36}{13}$

$= -\frac{23}{13}$

vi) $1 - \frac{16}{39}$

$= \frac{39}{39} - \frac{16}{39}$

$= \frac{23}{39}$

vii) $-\frac{23}{13} \div \frac{23}{39}$

$= -\frac{23}{13} \times \frac{39}{23}$

$= -\frac{897}{299}$

$= -3$

viii) $\frac{3}{8} - -3$

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

$= 3\frac{3}{8}$