RATIONAL NUMBER OPERATIONS PRACTICE

Answer the following questions on a separate piece of paper. All answers should be reduced to lowest terms. Check your answers with a calculator!

1. Change the following mixed numbers into improper fractions. Check with your calculator.

   a) $3\frac{5}{8}$ b) $-3\frac{5}{8}$ c) $-2\frac{7}{10}$ d) $-5\frac{2}{3}$

2. Calculate. Show your work. Check your answer by using your calculator.

   a) $-5\frac{1}{2}+2\frac{2}{3}$ b) $-9\frac{1}{2}-\left(-10\frac{3}{4}\right)$ c) $-7\frac{3}{5}+\left(-8\frac{1}{4}\right)$

3. Calculate. Show your work. Check your answer by using your calculator.

   a) $-2\frac{1}{2}\left(-1\frac{3}{5}\right)$ b) $\frac{15}{16}\div\left(-1\frac{1}{24}\right)$ c) $-2\frac{5}{6}\div\left(-1\frac{1}{12}\right)$

4. Use BEDMAS to evaluate each of the following.

   a) $\frac{-2}{5}+\frac{-3}{4}-\frac{7}{20}$ b) $\left(\frac{-2}{3}\right)^3$ c) $\frac{2}{5}\times\frac{-1}{2}+\frac{3}{10}$

   d) $\left(-3\frac{5}{8}+2\frac{1}{4}\right)^2$ e) $2\frac{2}{3}-\left(1\frac{2}{3}+3\frac{1}{2}\right)$ f) $\left(-2\frac{3}{8}\right)^2\div\left(-\frac{1}{16}\right)$

5. Evaluate each expression for the given values.

   a) $3x^2-2y$ for $x=\frac{4}{3}$ and $y=-2$ b) $\left(\frac{x}{y}\right)^2$ for $x=\frac{1}{2}$ and $y=-\frac{2}{3}$

ANSWERS

1. a) $\frac{29}{8}$ b) $\frac{-29}{8}$ c) $\frac{-27}{10}$ d) $\frac{-17}{3}$ 2. a) $\frac{-17}{6}$ b) $\frac{5}{4}$ c) $\frac{-317}{20}$

3. a) 4 b) $\frac{-9}{10}$ c) $\frac{34}{13}$ or $2\frac{8}{13}$

4. a) $\frac{-3}{2}$ or $-1\frac{1}{2}$ b) $\frac{-8}{27}$ c) $\frac{1}{10}$ d) $\frac{121}{64}$ or $1\frac{57}{64}$ e) $\frac{-5}{2}$ or $-2\frac{1}{2}$ f) $\frac{-361}{4}$ or $-90\frac{1}{4}$

5. a) $\frac{28}{3}$ or $9\frac{1}{3}$ b) $\frac{9}{16}$