

To earn full credit for this worksheet, you must follow the MTH 60 Documentation guidelines and do your work in pencil. No late work accepted.

Keep in mind that your homework is part of your "grade application," just as a cover letter and resume are part of a job application. Impressions count. Neatness and completeness make a lasting impression on the instructor (so does turning your homework in on time).

1. Perform the indicated operation and simplify, if possible. Remember to start with the original expression and line up your equal signs. Show ALL of your work, including any reducing that you do. I have done part a for you demonstrating proper documentation. **You need to properly show all of these steps to earn full credit.**

a. $\frac{1}{2} + \frac{1}{6}$

$$\begin{aligned}\frac{1}{2} + \frac{1}{6} &= \frac{1}{2} \cdot \frac{3}{3} + \frac{1}{6} \\ &= \frac{3}{6} + \frac{1}{6} \\ &= \frac{4}{6} \\ &= \frac{2 \cdot 2}{2 \cdot 3} \\ &= \frac{2}{3}\end{aligned}$$

b. $\frac{1}{3} + \frac{2}{15}$

c. $\frac{5}{2} - \frac{5}{6}$

d. $\frac{5}{4} \div \frac{3}{8}$

2. List all numbers from the set $\{-2.\bar{4}, \sqrt{22}, 3, \pi, 0, \sqrt{36}, \frac{4}{2}, 0.213\}$ that are

(a) natural numbers _____

(b) whole numbers _____

(c) integers _____

(d) irrational numbers _____

(e) rational numbers _____

3. Simplify $3(4a - 2b + 7)$. Remember to start with the original expression (to the left of the first equal sign) and line up your equal signs (if you have more than one step). Simplifications belong to the right of the equal signs.

4. Simplify $3(6m + 4n) + 2(5m + 3n)$. Remember to start with the original expression (to the left of the first equal sign) and line up your equal signs. Simplifications belong to the right of the equal signs.