1. [10 pts.] Find the value of $50-4(3+2^3)$, showing the steps in the order of operations.

2. [10 pts.] Simplify $|-7|$ and $|13-4|$.

3. [10 pts.] Find the sum $\dfrac{5}{8} + \left(-\dfrac{17}{12}\right)$, showing at least the step where the fractions have a common denominator.

4. [10 pts.] Find the difference $-\dfrac{5}{6} - \dfrac{1}{2}$, showing the step where the fractions have a common denominator.

5. [10 pts.] Find the value of $\dfrac{8(-1)+6(-2)}{-6-(-1)}$, showing at least two steps.

6. [10 pts.] Evaluate $(5x-2y)(-2a)$, given that $x=6$, $y=-4$ and $a=3$.

7. [10 pts.] Use the distributive property to rewrite $7(2v)+7(5r)$.

8. [10 pts.] Use the distributive property to rewrite $-(-3q+5r-8s)$.

9. [10 pts.] Simplify $2y^2 - 7y^3 - 4y^2 + 10y^3$.

10. [10 pts. each] Solve each equation.

   (a) $4x - 3 - 8x + 1 = -5x + 9$

   (b) $\dfrac{2}{7}z = 4$

   (c) $6(4x-1) = 12(2x+3)$

   (d) $3(4m-2) + 5m = 30 - m$

   (e) $\dfrac{1}{3}(x+3) + \dfrac{1}{6}(x-6) = x+3$

11. [10 pts.] Write $r \leq -10$ in interval notation, and graph the interval.

12. [10 pts. each] Solve each inequality, writing the solution set in interval notation and graphing it.

   (a) $-7x > 49$

   (b) $5r + 1 \geq 3r - 9$

   (c) $5(x+3) - 6x > 3(2x+1) - 4x$

13. [10 pts. each] Solve each formula for the indicated variable.

   (a) $V = LWH$ for L.

   (b) $Ax + By = C$ for y.