# Assignment #5-4 Secondary 3 Honors

**Precalculus Book**: Pg. 808 – 810 1, 2, 5, 8, 10, 12, 13, 33, 40, 51, 78
Pg. 817 10, 13, 27

**Additional Problems**:

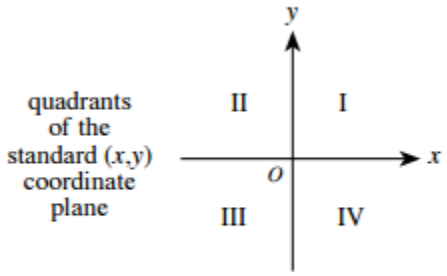
1. Write the following in simplified form:

a. $\frac{x^5}{x^2}$ b. $x^5 \cdot x^2$ c. $x^{-2}$ d. $(x^3)^4$

e. $\sqrt{75x^4}$ f. $\sqrt[3]{16x^5}$ g. $x^{1/2} \cdot x^2$ h. $\frac{x^2}{x^{1/2}}$

**ACT Review:**

1. What are the quadrants of the standard $(x,y)$ coordinate plane below that contain points on the graph of the equation $4x - 2y = 8$ ?




**A.** I and III only
**B.** I, II, and III only
**C.** I, II, and IV only
**D.** I, III, and IV only
**E.** II, III, and IV only

2. The graph of $y = -5x^2 + 9$ passes through $(1,2a)$ in the standard $(x,y)$ coordinate plane. What is the value of $a$ ?

**F.** 2
**G.** 4
**H.** 7
**J.** –1
**K.** –8

3. Jerome, Kevin, and Seth shared a submarine sandwich. Jerome ate $\frac{1}{2}$ of the sandwich, Kevin ate $\frac{1}{3}$ of the sandwich, and Seth ate the rest. What is the ratio of Jerome's share to Kevin's share to Seth's share?

**A.** 2:3:6
**B.** 2:6:3
**C.** 3:1:2
**D.** 3:2:1
**E.** 6:3:2

4. A particular circle in the standard $(x,y)$ coordinate plane has an equation of $(x - 5)^2 + y^2 = 38$. What are the radius of the circle, in coordinate units, and the coordinates of the center of the circle?

| | radius | center |
|---|---|---|
| **F.** | $\sqrt{38}$ | ( 5,0) |
| **G.** | 19 | ( 5,0) |
| **H.** | 38 | ( 5,0) |
| **J.** | $\sqrt{38}$ | (–5,0) |
| **K.** | 19 | (–5,0) |