

Alg 2 Extra Practice for Quiz

$$\frac{\sqrt{80}}{\sqrt{16} \cdot 5} = \frac{4\sqrt{5}}{4 \cdot 5} = \frac{\sqrt{5}}{5}$$

$$\frac{4\sqrt{252}}{\sqrt[4]{36} \cdot 7} = \frac{4 \cdot 6\sqrt{7}}{6 \cdot 7} = \frac{4\sqrt{7}}{7}$$

$$\frac{-\sqrt{196}}{14} = \frac{-14}{14} = -1$$

$$\frac{3\sqrt{-125}}{\sqrt[3]{-125} \cdot 5} = \frac{3 \cdot 5i}{-5 \cdot 5} = \frac{15i}{-25} = -\frac{3i}{5}$$

$$\frac{\sqrt{-9}}{\sqrt{-1} \cdot 9} = \frac{3i}{i \cdot 9} = \frac{3i}{9i} = \frac{1}{3}$$

$$\frac{\sqrt{-640}}{\sqrt{-16} \cdot 10} = \frac{8i\sqrt{10}}{4i \cdot 10} = \frac{8i\sqrt{10}}{40i} = \frac{2\sqrt{10}}{10} = \frac{\sqrt{10}}{5}$$

$$\frac{-3i \cdot 5i}{-15i^2} = \frac{-15i^2}{-15(-1)} = \frac{15}{15} = 1$$

$$\frac{-4i \cdot -8i}{32i^2} = \frac{32i^2}{32(-1)} = \frac{-32}{-32} = 1$$

$$\frac{-6i^3 \cdot 2i^4}{-12i^7} = \frac{-12i^7}{-12(i^2)^3 i} = \frac{-12(-1)^3 i}{-12(-1)i} = \frac{12i}{12i} = 1$$

$$\frac{6i(5i^2)}{30i^3} = \frac{30i^2 i}{30i^3} = \frac{30(-1)i}{30(-1)i} = \frac{-30i}{-30i} = 1$$

$$\frac{(-3i)^3}{-27i^3} = \frac{-27i^3}{-27i^3} = \frac{-27(-1)i}{-27(-1)i} = \frac{27i}{27i} = 1$$

$$\frac{i^{44}}{(i^2)^{22}} = \frac{1}{(-1)^{22}} = \frac{1}{1} = 1$$

$$\frac{i^{15}}{(i^2)^7 i} = \frac{(i^2)^7 i}{(-1)^7 i} = \frac{-i}{-i} = 1$$

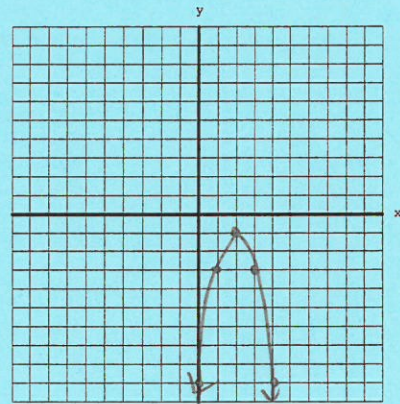
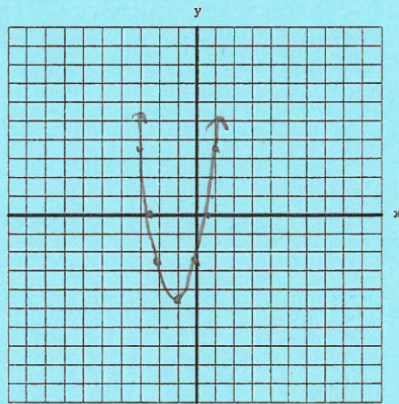
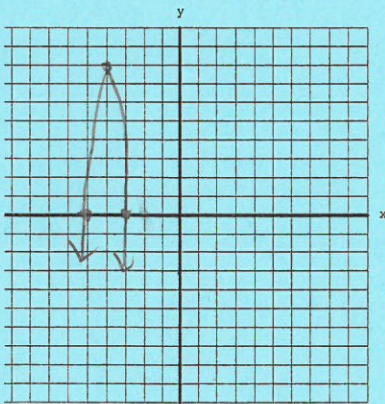
$$\frac{i^{135}}{(i^2)^{67} i} = \frac{(i^2)^{67} i}{(-1)^{67} i} = \frac{-i}{-i} = 1$$

Solve. Name the Vertex, X-intercepts, and Y-intercepts. Then graph.

$$f(x) = -8(x+4)^2 + 8$$

$$f(x) = \frac{1}{2}(2x-1)(2x+5)$$

$$f(x) = -2x^2 + 8x - 9$$



Vertex:  $(-4, 8)$   
 Y-intercept:  $(0, -120)$   
 X-intercepts:  $x = -5$   
 $x = -3$

Vertex:  $(-1, -4.5)$   
 Y-intercept:  $(0, -2.5)$   
 X-intercepts:  $x = \frac{1}{2}$   
 $x = -\frac{5}{2}$

Vertex:  $(2, -1)$   
 Y-intercept:  $(0, -9)$   
 X-intercepts:  $\frac{-8 \pm \sqrt{8^2 - 4(-2)(-9)}}{2(-2)}$   
 $\frac{-8 \pm \sqrt{64 - 72}}{-4} = \frac{-8 \pm 2i\sqrt{2}}{-4} = \frac{2 \pm i\sqrt{2}}{2}$