MATH 156: Precalculus
Fall 2015
Worksheet §2.1: Graphs of Functions

Below is a Readiness of Calculus Quiz.

Without the use of any aids, you must be able to sketch the graphs of the functions below, including intercepts, symmetry, asymptotes, some simple points and correct global behavior. For members of the same "family", you should be able to graph them on the same set of axes with correct relative position.

Furthermore, you should be able to complete the quiz in quickly, correctly, even if requested to do so in the middle of dinner.

SKETCH EACH OF THE FOLLOWING ON A SEPARATE SET OF AXES.

1. $f(x) = 5 - 2x$

2. $f(x) = -3$

3. $f(x) = x^2$

4. $f(x) = x^3$

5. $f(x) = \frac{1}{x}$

6. $f(x) = \frac{1}{x^2}$

7. $f(x) = \sqrt{x}$

8. $f(x) = \sqrt[3]{x}$

9. $f(x) = |x|$

10. $f(x) = [\![x]\!]$

1. $f(x) = x$, $f(x) = 2x$, $f(x) = 3x$, $f(x) = -x$, $f(x) = -2x$, $f(x) = -3x$

2. $f(x) = x^2$, $f(x) = x^4$, $f(x) = x^6$

3. $f(x) = x^3$, $f(x) = x^5$, $f(x) = x^7$

4. $f(x) = 1/x$, $f(x) = 1/x^3$, $f(x) = 1/x^5$

5. $f(x) = 1/x^2$, $f(x) = 1/x^4$, $f(x) = 1/x^6$

6. $f(x) = \sqrt{x}$, $f(x) = \sqrt[4]{x}$, $f(x) = \sqrt[6]{x}$

7. $f(x) = \sqrt[3]{x}$, $f(x) = \sqrt[5]{x}$, $f(x) = \sqrt[7]{x}$