

Chapter 1 & 2 Test Review

Chapter 1

- ☐ Be able to identify integers, rational numbers, irrational numbers, and real numbers
- ☐ Use the order of operations to simplify expressions
- ☐ Evaluate an expression for a given value of x
- ☐ Solve an equation for x
- ☐ Solve an absolute value equation
- ☐ Solve inequalities (including compound inequalities) and report the solution set over a given domain
- ☐ Solve inequalities (including absolute values) and graph the answer for a given domain

Chapter 2

- ☐ Determine the domain and range of function based on its graph
- ☐ Draw the graph of a function by making a table of values.
- ☐ Determine the dependent and independent variables for a function and sketch its graph
- ☐ Use a graph to determine if a graph is a function

Practice:

1. Indicate the sets to which each number belongs.
 - a. $-\sqrt{7}$
 - b. $\frac{3}{4}$
 - c. 1.43434343...
 - d. 0
 - e. -6
 - f. π
 - g. $\sqrt{-4}$
2. Name each polynomial (2 names). If the expression is not a polynomial, explain why.
 - a. $x^2y - 5$
 - b. $\frac{x^2}{y} + x - 3$
 - c. $\sqrt{7}x$
 - d. $x^2 - 8x - 2$
 - e. $5x^{\frac{1}{2}}$
3. Simplify each expression.
 - a. $40 - 10 \div 2$
 - b. $5 - 3[x - 7(2x - 6)]$
 - c. $\frac{5^3 - 6(7-3)^2}{7 - 8 \div 2 + 4}$

4. Evaluate the following expressions for $x = 5$ and $x = -4$.
- $3x - 8$
 - $|2x - 10|$
 - $3x^2 - 2x + 11$
5. Solve for x . If there is no solution, write ϕ .
- $2x + 7 = -5$
 - $|4x + 3| = 9$
 - $3(x - 7) = 3x + 15$
 - $4x - 11 + 2x = 6x - 5 - 6$
6. Graph the solution set, then write the answer in interval notation.
- $4x - 5 < 7$
 - $|x - 2| \leq 6$
 - $-13 < 2x - 7 \leq 5$
7. Make a table of values in the indicated domain. Graph the function.
 $y = x^2 - 3x$, domain: $[-1, 3)$
8. Sketch a reasonable graph for the description below. Label the axes for the dependent and independent variables.
The length of time an oven has been turned on and the oven's temperature are related.