|  |
| --- |
| Homework 1.2 |

Fundamental Skills

**Solve and graph the following linear inequalities. Write the solutions in both interval and set builder notation.**

1.  2. 

**Translate and solve the following verbal statements. Write final answers in interval notation.**

|  |  |  |  |
| --- | --- | --- | --- |
| 3. | 14 more than twice the difference of m and 8 is at most 30. Find all the values of m. | 4. | 20 less than 4 times the difference of 18 and m is at least 48. Find all the values of m. |

**Solve the following absolute value equations and inequalities. Write final answers in interval notation.**

5.  6. 

7.  8. 

**Applications**

|  |  |  |  |
| --- | --- | --- | --- |
| 9. | The average temperature in Lansing, Michigan in December is 25°F give or take 5°F. Write an absolute value inequality to match the average temperatures in Lansing this time of year. Solve your inequality to find the maximum and minimum temperatures you might expect. | 10. | Find the absolute value inequality that resulted in the equations below.    **a)**  **b)** |

**Common Core Exam Prep**

**Show your work algebraically.**

|  |  |  |  |
| --- | --- | --- | --- |
| 11. | Solve the following equation:    A {-8, 2}  B {-2, 8}  C {2}  D {-2} | 12. | **Constructed Response:** The *Triangle Inequality Theorem* states that the sum of the measures of any two sides of a triangle is greater than the measure of the third side.   1. Write three inequalities to express the relationship between the sides of ΔABC 2. Explain the logic behind this property in your own words. Support your explanation with one example that works and one that does not. |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |