**Homework 1.1 Name:**

**You MUST show your work to receive full credit!**

|  |  |  |
| --- | --- | --- |
| Write the following algebraically:  Two less than a number squared | Simplify the following: | Simplify the following: |
| Simplify the following: | Simplify the following: | Convert 936 inches per hour to **feet per minute** |
| **Find y** when **x = 8** for the following: | **Find y** when **x = -5** for the following: | **Find x** when **y = 13** for the following: |
| Write the arithmetic sequence **(explicit)** for the following:   |  |  |  |  |  | | --- | --- | --- | --- | --- | | x | 1 | 2 | 3 | 4 | | y | 485 | 470 | 455 | 440 | | Write the arithmetic sequence **(explicit)** for the following:   |  |  |  |  |  | | --- | --- | --- | --- | --- | | x | 1 | 2 | 3 | 4 | | y | 10 | 20 | 30 | 40 | | Write the arithmetic sequence **(explicit)** for the following:   |  |  |  |  |  | | --- | --- | --- | --- | --- | | x | 1 | 2 | 3 | 4 | | y | 37 | 49 | 61 | 73 | |
| Create the **recursive formula** for the following arithmetic sequence: | Create the **explicit formula** for the following arithmetic sequence: | Find the **52nd term** for the following: |
| The value of the 8th term is 78. The sequence is increasing by 10 at each step. **Write the explicit equation.** | The value of the 8th term is 78. The sequence is increasing by 10 at each step. **Find the 20th term.** | The value of the 8th term is 78. The sequence is increasing by 10 at each step. **Find the 9th term.** |
| Fill in the blanks:   1. 3, 8, 13, 18, \_\_\_\_, \_\_\_\_, \_\_\_\_.. 2. Common Difference: \_\_\_\_ 3. Recursive Formula: 4. Explicit Formula: | Fill in the blanks:   1. 11, 9, 7, 5, \_\_\_\_, \_\_\_\_, \_\_\_\_.. 2. Common Difference: \_\_\_\_ 3. Recursive Formula: 4. Explicit Formula: | Fill in the blanks:   1. 3, 1.5, 0, \_\_\_\_, \_\_\_\_,\_\_\_\_... 2. Common Difference: \_\_\_\_ 3. Recursive Formula: 4. Explicit Formula: |
| Explicit equation:  Recursive:   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Term# | 1 | 2 | 3 | 4 | | Value | 10 | 13 | 16 |  |   Find the 4th term: \_\_\_\_\_  Which formula did you use and why? | Explicit equation:  Recursive:   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Term# | 1 | 2 | … | 52 | | Value | 10 | 13 | … |  |   Find the 52nd term: \_\_\_\_\_  Which formula did you use and why? | What is the common difference for the following: |
| Write the recursive formula for the following: | Write the explicit formula for the following: | Create a graph for the picture to the left. |
| I have a common difference of -3 and my first term is 28. Write my explicit formula: | My first term is 7. My 6th term is 32. What is my common difference?  Write my explicit formula: | My first term is 72. My 8th term is 24. What is my common difference?  Write my recursive formula: |