**Multiple Choice (2 points each). You must show work/explain EVERY question on the Weekly.**

1.) Solve the following system of equations for *x*: $-6x+12y=-12$ 1.)\_\_\_\_\_\_\_\_\_

 $-2x+6y=2$

|  |  |  |  |
| --- | --- | --- | --- |
| 1) | 8 | 3) | -3 |
| 2) | -1 | 4) | 6 |

2.) Which is the correct factorization of $4x^{2}- 64$ ? 2.) \_\_\_\_\_\_\_\_\_

|  |  |  |  |
| --- | --- | --- | --- |
| 1) | $$4\left(x^{2}-4\right)(x^{2}+4)$$ | 3) | $$\left(x-2)(s+2)\right)(x^{2}+4)$$ |
| 2) | $$4\left(x-4\right)(x+4)$$ | 4) | $$\left(2x^{2}-4\right)(2x^{2}+4)$$ |

3. ) The value of the x-intercept for the graph of $4x-5y=40$ is 3.) \_\_\_\_\_\_\_\_\_\_

|  |  |  |  |
| --- | --- | --- | --- |
| 1) | 10 | 3) | $$\frac{-4}{5}$$ |
| 2) | $$\frac{4}{5}$$ | 4) | $$-8$$ |

4.) Sam and John have ages that are consecutive odd integers. The product of their ages is 783. Which equation could be used to find John’s age, j, if he is the younger man?

 4.) \_\_\_\_\_\_\_\_\_\_

|  |  |  |  |
| --- | --- | --- | --- |
| 1) | $$j^{2}+2=783$$ | 3) | $$j^{2}+2j=783$$ |
| 2) | $$j^{2}-2=783$$ | 4) | $$j^{2}-2j=783$$ |

5.) Given function $f\left(x\right)=2x-4$ defined on the domain $2\leq x\leq 6$ . The range of the function is 5.) \_\_\_\_\_\_\_\_\_\_

|  |  |  |  |
| --- | --- | --- | --- |
| 1) | $$0\leq y\leq 8$$ | 3) | $$2\leq y\leq 6$$ |
| 2) | $$0\leq y\leq \infty $$ | 4) | $$-\infty \leq y\leq \infty $$ |

S**hort Answer:**

 6.) Find the product: $\left(x+2\right)\left(x^{2}+4x+3\right)= $ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **[4] points**

 8.) The following graph represents the height above the ground versus time at a resort as Thomas rides his favorite ski slope. **[6] points**

|  |  |
| --- | --- |
|  | a. State the domain and, in your own words, what the domain represents.b. State range and, in your own words, what the range represents.c. What might Thomas have been doing for the interval 0 ≤ t ≤2 ? What was his average rate of change? Use proper units in your answer.d. What might Thomas have been doing for the interval 2 ≤ t ≤ 6? What was his average rate of change? Use proper units in your answer and compare to what you found in (c). |