Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_

**Unit 3 Review Handout**

**Write a function rule for the table.**

|  |  |
| --- | --- |
| ***x*** | ***f***(***x***) |
| 2 | –8 |
| 3 | –12 |
| 4 | –16 |
| 5 | –20 |

|  |  |
| --- | --- |
| ***x*** | ***f***(***x***) |
| 3 | 7 |
| 4 | 8 |
| 5 | 9 |
| 6 | 10 |

1.) 2.)

*f*(x) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ *f*(x) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3.) **Write a function and solve.** The amount of a person’s paycheck varies directly with the number of hours worked. For 16 hours of work, the paycheck is $124.00. How many hours would you have to work to make $300?

**Is the relation a function and determine whether the function is linear or nonlinear.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| x | 1 | 3 | 5 | 3 |
| y | 4 | 2 | 0 | -2 |

4.) x = -2 5.) x – 3y = 9 6.)

**Evaluate the function when x = -2, 0 and 3**

7.) *b*(x) = -2x – 4 8.) *h*(x) = $\left|-x+5\right|$

**Graph the linear equation.**

9.) x – 3y = 6 10.) x = -4



**Find the slope, x–intercept and y–intercept of the line.**

11.) 2x + 3y = 6 12.) $\frac{1}{2}$x + y = -8

Slope=\_\_\_\_\_\_ x-int = \_\_\_\_\_\_\_ y-int=\_\_\_\_\_\_\_ Slope=\_\_\_\_\_\_ x-int = \_\_\_\_\_\_\_ y-int=\_\_\_\_\_\_\_

**Express in standard form.**

13.) 8 – 2y = 6(x – 4y)

**Graph.**

14.) y = $\left|x-3\right|$ - 2 15.) y = $\left|x\right|$ + 1



**Answers:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1.) f(x) = -4x | 2.) f(x) x + 4 | 3.) 16x= 124 x = 7.75; f(x) 7.75x;7.75x = 30039 hours | 4.) Not function, linear | 5.) function, linear |
| 6.) not function, nonlinear | 7.) 0, -4, -10 | 8.) 7, 5 , 2 | 9.) y= $\frac{1}{3}$x – 2 | 10.)  |
| 11.)Slope= -$\frac{2}{3}$x-int=(3,0)y-int=(0,2) | 12.) Slope= -$\frac{1}{2}$x-int=(-16,0)y-int=(0,-8) | 13.) 6x – 22y = 8 | 14.) | 15.)  |