Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Equation:**  *slope-intercept* **vs.** *standard form*

 $y=mx+b$ $Ax+By=C$

$(a) Determine the slope and y-intercept of the equation $

 $4x-3y=6$.

**Linear**

**Functions**

**Graph:**

Write the equations for each line shown in the graph above.

*(a) (c)*

*(b) (d)*

 Period: \_\_\_\_\_\_\_

**Table:**

Write the equations of the linear functions represented in the tables below:

|  |  |
| --- | --- |
| *x* | *y* |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

1. *(b)*

|  |  |
| --- | --- |
| *x* | *y* |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

**Words:**

1. Joan has 5 more quarters than nickels. If she has a total of $3.35, how many total coins does Joan have?

*(b)* Ryan has 24 coins in his pocket which is made up of only nickels and dimes. If he has $1.50 in his pocket, how many nickels, n, does Ryan have?

**Equation:**  *standard form*

 $f(x)=ax^{b}$

**Exponential**

**Functions**

**Graph:**

Write the equation for the function shown in the graph above.

**Table:**

Write the equations of the exponential functions represented in the tables below:

|  |  |
| --- | --- |
| *x* | *y* |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

1. *(b)*

|  |  |
| --- | --- |
| *x* | *y* |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

**Words:**

*(a)* The current population of a town is 10,000. If the population, *P*, increases by 20% each year, write an equation that could be used to find the population after *t* years?

 *(b)* A car depreciates (loses value) at a rate of 4.5% annually. Greg purchased a car for $12,500. Write an equation that can be used to determine the value of the car, *V*, after 5 years?

*(c)* If the car depreciated at $300 per year, would it still be an exponential function? Write an equation that could be used to determine the value of the car, *V*, after *y* years.