|  |
| --- |
| **Let’s practice finding the Domain and Range of each situation!**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date \_\_\_\_/\_\_\_\_/\_\_\_\_ |
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|  |  |  |
|  |  |  |
|  |    |  |
| You have 3 quarts of paint to paint the trim in your house. A quart of paint covers 100 ft2. The function f(x)= 100x represents the **area f(x)**, in square in feet, that **x quarts** of paint cover.

|  |  |
| --- | --- |
| Quarts | Area |
| -1 | ??? |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 | 300 |

Domain Range: Continuous or Discrete | A car can travel 30 miles for each gallon of gasoline. The function ​d(x) = 30x represents the distance​ **d(x), in​ miles**, that the car can travel with **x gallons** of gasoline. The​ car's fuel tank holds 12 gal.

|  |  |
| --- | --- |
| Gallons | Miles |
| -1 | ??? |
| 0 | 0 |
| 1 | 30 |
| 3 |  |
| 12 | 360 |

Domain:Range: Continuous or Discrete | The **total height h** of a stack of cans **is a** **function of** the **number n of layers of 4 inch cans** used. This situation is represented by h(n) =4n. (maximum of 6 cans)

|  |  |
| --- | --- |
| # of Cans | Height |
| -1 | ??? |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |

Domain:Range: Continuous or Discrete |
|  | The domain of **f(x)** = -1.5x + 4 is {1, 2, 3, 4}. What’s the range? | The domain of g(x) = 4x - 12 is {1, 3, 5, 7}. What is the range? |
| The Algebra 1 team took students with an A average on a field trip each six weeks. The **number of buses needed** to transport the students on each trip **is a function of** the **number of students who were sent on each trip**. This function consists of only the ordered pairs (10, 1), (55, 2), (90, 3) (170, 6), (325, 11), (500, 17).Domain:Range:  | The **total cost** of renting a banquet hall **is a** **function of** the **number of hours** the hall is rented. The owner of the banquet hall charges $85 per hour up to a maximum of 4 hours plus a $50 cleaning fee.

|  |  |
| --- | --- |
| Hours | Cost |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |

Domain:(number of hours) Range: (Total cost)  | The **total cost** of renting a banquet hall **is a** **function of** the **number of hours** the hall is rented. The owner of the banquet hall charges $85 per half hour up to a maximum of 4 hours plus a $50 cleaning fee.

|  |  |
| --- | --- |
| Hours | Cost |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |

Domain:(number of hours) Range: (Total cost)  |
| The number of 18-wheelers, W(c), needed to transport c cars in 1 day can be found using the function W(c) = $\frac{c}{20}$ . There are no more than 6,000 cars transported by the 18-wheelers daily.

|  |  |
| --- | --- |
| Cars | 18-Wheelers |
|  |  |
|  |  |
|  |  |

 | The number of boats, B(c), needed to transport c cars in 1 day can be found using the function B(c) = $\frac{c}{20}$ . There are no more than 4,000 cars transported by the boats daily.

|  |  |
| --- | --- |
| Cars | Boats |
|  |  |
|  |  |
|  |  |

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