**INDEPENDENT PROBLEM SOLVING**

|  |
| --- |
| 1) Dirt from a construction site is being loaded into large containers to be hauled away. One container is full after hour.   1. Write an equation that represents the relationship between the number of containers filled, y, and the number of hours, x. 2. How much of a container will be filled after 2 hours?      1. Use an equation or constant of proportionality (unit rate) to determine how long it will take to fill 1 container. |
| 2) A bird flew 70 miles in hours.   1. Write an equation that represents the relationship between the total miles flown, d, in t hours. 2. Use the equation to determine how long it will take the bird to fly 45 miles. 3. Draw a double number line showing the miles flown by the bird for up to 5 hours. |

|  |
| --- |
| 3) In 15 minutes, the rocket had burned through of a fuel tank.   1. Write an equation relating the number of fuel tanks used, y, in x hours. 2. What is the rate of tanks burned per hour? 3. How long does it take for the rocket to use 1 tank of fuel? |
| 4) The store sells a 1 ½ pound bag of walnuts for $12. All bags of walnuts are sold at the same rate of price per pound.   1. Write an equation relating the cost of walnuts, y, based on x pounds bought. 2. How many pounds of walnuts could you buy for $10? 3. Draw a graph on a coordinate plane showing the price paid for up to 5 pounds of walnuts. 4. What ordered pair (x, y) represents the unit price (constant of proportionality)? Explain the meaning of each coordinate. |