# Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per.\_\_\_\_\_\_\_

**U6 CWK #4** *Write Equations to Solve Real-world Problems*

**Directions:** Write the equation for each of the following real-world problems.

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| --- | --- |
| 1. The graph below shows a trip taken by a car where *x* is time (in hours) the car has driven and *y* is the distance (in miles) from Salt Lake City. Label the axes of the graph.     \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Equation:  Use your graph and equation to tell the story of this trip taken by the car.   1. The graph below shows the relationship between temperature in degrees Celsius and temperature in degrees Fahrenheit.   **(-10, 14)**  **(0, 32)**  http://openclipart.org/image/300px/svg_to_png/110065/thermometer.png      Equation: | 1. The graph below shows the weight of a baby elephant where *x* is the time (in weeks) since the elephant’s birth and *y* is the weight (in pounds). At 4 weeks, the elephant weighed 352 lbs. and at 12 weeks, the elephant weighed 592 lbs. Label the axes of the graph.     **(4, 352)**  **(12, 592)**  Equation:  Use your graph and equation to tell the story of this elephant.   1. Peter is draining his hot tub so that he can clean it. He puts a hose in the hot tub to drain the water at a constant rate. After 5 minutes there are 430 gallons of water left in the hot tub. After 20 minutes there are 370 gallons of water left in the hot tub. Let *x* be time (in minutes) and *y* be water remaining (in gallons).   Equation:  Use your equation to add more details to the story of Peter draining the hot tub. |
| 1. A handyman charges $40 an hour plus the cost of materials. Rosanne received a bill from the handyman for $477 for 8 hours of work.   Equation:  Use your equation to add more details to the story about the work the handyman did for Roseanne. | 1. The table below shows the height *h* (in feet) of a hot air balloon *t* minutes after it takes off from the ground. It rises at a constant rate.  |  |  | | --- | --- | | *t*  (minutes) | *h*  (feet) | | 2 | 300 | | 5 | 750 | | 9 | 1,350 |   http://openclipart.org/image/300px/svg_to_png/18935/maidis_Vertical_Striped_Hot_Air_Balloons_2.png  Equation:  Use the table and equation to tell the story of the hot air balloon. |

7. Toa takes the freeway home from work so he can use his cruise control. The table below shows the time *x* in minutes since he entered the freeway related to the distance *y* in miles he is from his exit at several points on his journey.

|  |  |
| --- | --- |
| *Time(x)* | *Distance(y)* |
| 8 | 34 |
| 20 | 25 |
| 32 | 16 |
| 40 | 10 |



1. Write an equation that relates the time Toa has been on the freeway to the distance he is from his exit.
2. What does the *y*-intercept represent in this equation?
   1. Use your equation to predict how much time will pass before Toa reaches his exit.