Converting Statements to Algebraic Equations

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1. A baker can make 6-dozen doughnuts in an hour. What is the equation relating the number of doughnuts (D) to the number of hours of baking (h)? Note that D is the actual number and not dozens. What would be the equation if the time were in minutes (m)? What would be the domain and range of the variables? What are the units of the slope and intercept?

2. A baker can make 6-dozen doughnuts in 1.5 hours. What is the equation relating the number of doughnuts (D) to the number of hours of baking (h)? What would be the equation if the time were in minutes (m)? What would be the domain and range of the variables? What are the units of the slope and intercept?

3. A baker can make 6-dozen doughnuts in 1.5 hours. What is the equation relating the number of doughnuts (D) to the number of hours of baking (h)? What would be the equation if the time were in minutes (m)? What would be the domain and range of the variables? What are the units of the slope and intercept?

4. A painter takes 0.5 hours to setup her equipment and then she can paint at 200 square feet per hour. What would be the equation that describes the area she can paint (A) after (h) hours? What would be the domain and range of the variables? What are the units of the slope and intercept?

5. A painter takes 1.5 hours to setup her equipment and then she can paint at 200 square feet per hour. What would be the equation that describes the area she can paint (A) after (m) minutes? What would be the domain and range of the variables? What are the units of the slope and intercept?

6. A Jiffylube operator can perform 3.5 oil changes per hour. It takes the operator 20 minutes to set up. What would be the equation that describes the number (n) of oil changes the operator can perform in (h) hours? What would be the domain and range of the variables? What are the units of the slope and intercept?

7. The Jiffylube operator above charges $29.95 per oil change. What is the equation for the income (I) in dollars after being open for (h) hours? What would be the domain and range of the variables? What are the units of the slope and intercept?

8. A salesman is making a base salary and a commission. If the salesman makes $200 per week base and $45 dollars per unit sold, what is the equation for the salesman's weekly income (I) for (n) units sold? What would be the domain and range of the variables? What are the units of the slope and intercept?

9. A salesman is making a base salary and a commission. If the salesman makes $200 per week base and $45 dollars per unit sold for the first 50 units, for the next 25 units the commission is $75 dollars per unit, and then for the number over 75, the commission becomes $100 dollars per unit. What are the equations and domains for the salesman's weekly income (I) for (n) units sold?

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