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For full credit, show your work. This may include a picture, table, diagram, your 'guess and check' work, or an equation(s).

1. A welder makes $\$ 2,900$ more a year than his friend, an electrician. Together, they earn $\$ 99,900$ in a year. How much does each person earn a year?
2. A machinist has a stockpile of metal that weighs 40 pounds and it is increasing by 5 pounds a week. His instructor has a stockpile of metal that weighs 120 pounds, but it is decreasing by 15 pounds a week. In how many weeks will they have the same amount of metal?
3. Tracy makes $\$ 20$ per hour as a mechanic and $\$ 14$ per hour in a data clerk. Last week she worked 40 hours total and made $\$ 620$. How many hours of each job did she work?
4. A culinary arts student wanted to make some extra money, so he opened up a vending cart. It cost him of $\$ 160$ per day to run the cart. His average sales per day are 100 cookies at $\$ 1.25$ apiece and 80 Pretzels at $\$ 2.50$ apiece. What is his profit in a 30 day period?
5. Given the sequence: $\mathbf{1 7}, \mathbf{2 3}, \mathbf{2 9}, \ldots$
a) Is it a geometric sequence or arithmetic sequence? $\qquad$ Does it have a common difference or common ratio? $\qquad$ What is it? $\qquad$
b. What are the next 2 terms in the sequence? $\qquad$ ,
c. What is the $15^{\text {th }}$ term in the sequence.
d. Find the sum of the first 15 terms of this sequence.
6. Given the sequence: $\mathbf{4}, \mathbf{2 0}, \mathbf{1 0 0}, \ldots$
b) a. Is it a geometric sequence or arithmetic sequence? $\qquad$ Does it have a common difference or common ratio? $\qquad$ What is it? $\qquad$
b. What are the next 2 terms in the sequence? $\qquad$ , $\qquad$
c. Find the $10^{\text {th }}$ term of the sequence.
d. Find the sum of the first 10 terms of the sequence.
7. For a Fibonacci sequence, the 15 th term is 377 and the 17 th term is 987.

Find the 16th term. $\qquad$
Find the $18^{\text {th }}$ term. $\qquad$

