Name _____. Period. _____. Date. _____

Inverse Relationships Word Problems

For each question below:
- Define your variables
- Write an equation that models the situation
- Solve the problem

1. If 32 men can reap a field in 15 days, in how many days can 20 men reap the same field?

2. 12 men can dig a pond in 8 days. How many men can dig it in 6 days?

3. A hostel has enough food for 125 students for 16 days. How long will the food last if 75 more students join them?

4. A fort had enough food for 80 soldiers for 60 days. How long would the food last if 20 more soldiers join after 15 days?

5. 500 soldiers in a fort had enough food for 30 days. After 6 days, some soldiers were sent to another fort and thus the food lasted for 32 more days. How many soldiers left the fort?

6. 8 taps having the same rate of flow, fill a tank in 27 minutes. If two taps go out of order, how long will the remaining taps take to fill the tank?

7. 70 patients in a hospital consume 1350 liters of milk in 30 days. At the same rate, how many patients will consume 1710 liters in 28 days?

8. If 30 workers working 7 hours a day can finish a piece of work in 18 days, how many workers working 6 hours a day can finish it in 30 days?

9. If 5 men working 6 hours a day can reap a field in 20 days, in how many days will 15 men reap the field if they work for 8 hours a day?

10. If 18 binders can bind 900 books in 10 days, how many binders will be required to bind 660 books in 12 days?

11. If 20 men can build a 112-m-long wall in 6 days, what will be the length of a similar wall that can be built by 25 men in 3 days?

12. 6 men, working 8 hours a day, earn $ 8400 per week. What will be the earning per week of 9 men who work for 6 hours a day?

13. If 270 kg of corn would feed 42 horses for 21 days, for how many days would 360 kg of it feed 21 horses?

14. Five machines, when operated for 9 hours each day, can harvest a farm in 16 days. How many days would 8 machines take to harvest the same farm, if each machine is now operated for 10 hours each day?