Ratio & Proportion **Name**
Date

Definitions

1*. Ratio**

2.* Proportion**

3.* Unit ratio**

4.* How do you solve a proportion problem when more information is given in terms of the given ratio?**

5.* How do you solve a proportion problem when more information is given NOT in terms of the given ratio?**

6.* How is solving a direct variation problem different from solving a proportion problem?**

7.* Translate to mathematics: *y varies directly as x*.**

8.** **Express the ratio 5 boys to every 7 girls as a fraction.**

9.** **Express each ratio in simplest form.**

a. 6 to 8

b. 24 to 32

10. Bob's club has 50 members. Ten are male and the remainders are females. Find:**

a. The ratio of males to females.

b. The ratio of males to the total number of members in the club.

c. The ratio of the total number of people in the club to the number of females.

11.** **Solve for x.** $\frac{3}{4} = \frac{21}{x}$

12.** **Solve for x.** $\frac{15}{24} = \frac{x}{120}$

13.** **Solve for x.** $\frac{x}{3} = \frac{15}{x}$

14.** **If there are 12 inches in one foot, how many inches are there in five feet?**

15. ** **The legend on a map indicates one inch equals 35 miles. If the distance traveled on the map is four inches, how many miles would have to be traveled?**

16..** **If a basketball player makes 25 out of 45 baskets in his first game, how many baskets would you expect him to make in the second game if he attempted 18 shots?**

17.** **On a trip across country Bob used 25 gallons of gas to travel 300 miles. At this rate, how much gas will he use to travel 3000 miles?**

18.** **If three pieces of candy cost 10¢, how much will 16 pieces cost?**

19.** **If the ratio of boys to girls in art class is 5 to 7, how many girls are there in class if there are 60 students enrolled?**

20.** **The ratio of length to width of a rectangle is 8 : 3. Find the dimensions of the rectangle if the perimeter is 44 inches.**

21.* **Bob saves $16 in 16 days. His sister Sarah saves $49 in 7 weeks, are these rates equivalent. Explain your answer.**

22.* **A candle is 30 inches long. After burning 12 minutes, the candle is 25 inches long. How long would it take the whole candle to burn?**

23*. If $\frac{a}{b} = \frac{c}{d}$, **show mathematically how** $ad = bc$ **– cross multiplying.**

24.* **Dad purchased a radio that was marked down 20% for $68.00. What was the original cost of the radio!**

25* **The number of students passing the driving test varies directly with the number of students who enrolled in driving school. Of the 400 students taking the test, 80 passed. If 500 students took the test, how many would have attended driving school?**

26.*** **Provide parent/guardian contact information; phone, cell, email, etc. (CHP)**