1. **X Y Z**

**Write the simplified ratios**:

 X : Y \_\_\_\_\_\_\_\_\_\_\_ Y : X \_\_\_\_\_\_\_\_\_\_\_

 Y + X : Z \_\_\_\_\_\_\_\_\_\_\_ Z – Y : X \_\_\_\_\_\_\_\_\_\_\_

**Find each unit rate. Round to the nearest tenth as needed.**

2. A store sells 3 movies for $4.99 3. 25 students use 120 sheets of paper

4. A track athlete runs 8 miles in 1.5 hours

**Convert the given units.**

5. 3 km = \_\_\_\_\_ m 6. 5 yds = \_\_\_\_ ft 7. 72 cm = \_\_\_\_ km

8. James can write 700 words of an essay in 50 minutes. How much can he write per hour?

9. David drives 65 miles per hour. What is his speed in yards per minute? (\*1 mile = 1760 yards)

**Solve each proportion. Round to the nearest tenth as needed**

10. $\frac{5}{4}=\frac{x}{12}$ 11. $\frac{8}{2x}=\frac{15}{60}$ 12. $\frac{x+10}{10}=\frac{18}{12}$ 13. $\frac{3}{x-2}= \frac{-4}{2x}$

14. What is 23% of 46? 15. 37.5 is 60% of what number?

16. What percent of 175 is 35? 17. 23 is what percent of 80?

18. 19.

20. A rectangle has a width of 12in and a length of 8in. A second rectangle is made by cutting the measurements in half. What is the **ratio** of the two rectangles:

a) side lengths

b) perimeter

c) area

22. The scale on a map is 1 inch : 500 miles. If two cities are 875 miles apart, how far apart are they on the map?

24. A 6ft tall person casts a 3.5ft shadow in the sun. A nearby tree is 15ft tall. What is the length of the tree’s shadow?

26. Find the simple interest earned after 5 years on an investment of $2000 at 3.2%.

28. A bike costs $220 but is on sale for 60% off. How much does the bike actually cost?

21. The ratio of red marbles to blue marbles in a bag is 4:7. There are 16 red marbles. How many blue marbles are there?

23. 45% of student at school have jobs. If there is a total of 500 students, how many of them have jobs?

25. Jenna makes 8% commission on her sales. What does she earn from a $210,000 sale?

27. You deposit $50 into a bank account that earns simple interest with a rate of 3.5% for 3 years. How much interest did you earn?

29. A restaurant bill is $27.95.

 a) Estimate a 15% tip

 b) What is the total cost?