

Name \_\_\_\_\_

Math 7, Period \_\_\_\_\_

\_\_\_\_\_ Problems Wrong

\_\_\_\_\_ Points Missed

\_\_\_\_\_ Grade Academic

## Test Review – Ratios, Unit Rates, & Proportions

A survey on favorite colors was created. List all three forms of ratios for the following:

1) Green to Yellow

Favorite Color	Number of People
Green	23
Yellow	20
Blue	16
Red	25

2) Blue to Yellow

3) Red to Total Number of People

4) The WoodCreek Junior High PTA is buying food for Fun Food Friday. They have narrowed their choices down to 3 different stores that they can choose to buy their candy from. In order to save the most money as possible, help the PTA decide which store has the cheapest unit price (price per candy bar).

Store	Price and Packaging
A	25 Candy Bars for \$25
B	15 Candy Bars for \$20
C	10 Candy Bars for \$8

**For #5 and #6, find the unit rate, rounding to the nearest tenth if necessary. Don't forget both the labels for each problem!**

5) In 4 months, 104 gallons were used (determine gallons per month)

6) 322 miles in 7 hours (determine miles per hour)

8) 5 movie tickets for \$37.50 (determine cost per ticket)

9) \$230 for 40 hours (determine cost per hour)

10) The scale of a map is 1 inch represents 4 miles. How many miles does 0.5 inches represent?

Using the information provided below, write the following ratios in all three forms in simplest form.

Animal	San Diego Zoo	Houston Zoo
Elephants	6	5
Snakes	102	78
Lions	4	5
Gorillas	8	5

11) Total elephants to total gorillas (refer to both zoos together)

12) Total animals at San Diego zoo to total animals at Houston zoo

13) Number of snakes at San Diego zoo to number of snakes at Houston zoo

Using your formula chart, convert the following units. Make sure to label your answers! 😊

14) 3 miles = \_\_\_\_\_ feet

15) 2 pints = \_\_\_\_\_ cups

16) 1,500 lbs = \_\_\_\_\_ ton

17) 2 gallons = \_\_\_\_\_ cups

18)  $\frac{3}{4}$  year = \_\_\_\_\_ days

19) 1 hour = \_\_\_\_\_ seconds

20) 3 miles = \_\_\_\_\_ inches

**Determine whether the following situations (proportions) are equivalent. Use = or  $\neq$  as your answer.**

21) 3:8 and 9:24

22)  $\frac{4}{7}$  and  $\frac{5}{8}$

23) 18 to 36 and 27 to 54

**Set-up a proportion and solve the following word problems. Be sure to label your answers appropriately.**

24) The ratio of girls to boys is 3:5. If there are 15 boys in the classroom, how many students are there total?

25) In the forest, the ratio of deciduous trees to evergreens is 2 to 7. If there are 400 deciduous trees in the forest, how many trees are in the forest all together?

- 26) Water was leaking from a faucet at a rate of  $\frac{1}{2}$  gallon every 2 minutes. If it took 18 minutes to stop the leak, how much water was wasted?
- 27) The ratio of mango juice to guava juice in Paradise Punch is 5 to 3. Leah has 32 fluid ounces of mango juice. How much guava juice does she need?
- 28) A marathon runner ran the first 4 miles in 27.8 minutes. If he continues running at this pace, how long will it take him to run the entire marathon of 26.2 miles?
- 29) A map of Yosemite National Park is drawn to a scale of 1 in = 1.65 mi. On the map, Tioga Pass is 13.8 inches from Yosemite Falls. What is the actual distance?
- 30) Red brass is an alloy made by combining copper with zinc in a ratio of 16 to 3. How much zinc should be combined with 40 kg of copper to make red brass?
- 31) Which of the following represents the least percent of change?
- A) A coat that was originally priced at \$90 is now \$72.
  - B) A puppy who weighed 6 ounces at birth now weighs 96 ounces.
  - C) A child grew from 54 inches to 60 inches in one year.
  - D) A savings account increased from 4500 to \$550 in 6 months.

32) Jack is checking over his work. Once, he worked the problem by hand and then again with the use of a calculator. Which time, if either, was correct? Explain.

**Jack's Problem: What is the percent of change on \$130 UGG boots discounted to \$46?**



By hand, I did:

$$\frac{\$130 - \$46}{\$46} \approx 1.83 \text{ or } 183\%$$



With a calculator, I did:

$$\frac{\$130 - \$46}{\$130} \approx 0.65 \text{ or } 65\%$$

33) Four pounds of pecans cost \$12.75. How much is this per pound?

34) Julie plans to buy a new flat screen monitor that cost \$1,299. For this weekend only, TV Town has a 15% discount on all monitors. She lives in Florida where there is a 6% sales tax.

- A) Calculate the discount amount.
- B) What is the sale price? This is also called the subtotal because tax has yet to be included.
- C) Calculate the sales tax (on the sale price).
- D) What is the total?

**Be sure to study past assignments. This review does not cover in depth percent of change. However, it will be found on the test!**