

## Review for Test #3 over Ch 5 and 6

**Work all the problems on a separate piece of paper showing all steps.**

**Write the following as ratios or as rates in simplest form:**

- 1) The rate of 14 eggs per 6 cakes.
- 2) The ratio of 84 feet to 35 yards.
- 3) The ratio of  $3\frac{1}{8}$  grams to  $4\frac{1}{6}$  grams.
- 4) The ratio of 11.4 cups to 3 quarts (hint: 4 cups = 1 quart)
- 5) The rate of \$345 for 600 ounces.
- 6) The rate of 675 revolutions in 100 minutes.

**Write the following as a unit rate:**

- 7) The rate of 252 miles on 9 gallons of gas.
- 8) The rate of \$16.92 for 48 ounces of cheese.

**Solve for x:**

$$9) \frac{5}{9} = \frac{15}{x} \qquad 10) \frac{1.8}{3.2} = \frac{3.6}{x} \qquad 11) \frac{1\frac{4}{5}}{5\frac{1}{7}} = \frac{x}{\frac{10}{21}} \qquad 12) \frac{\frac{3}{11}}{0.65} = \frac{\frac{6}{13}}{x}$$

**Complete the following chart:**

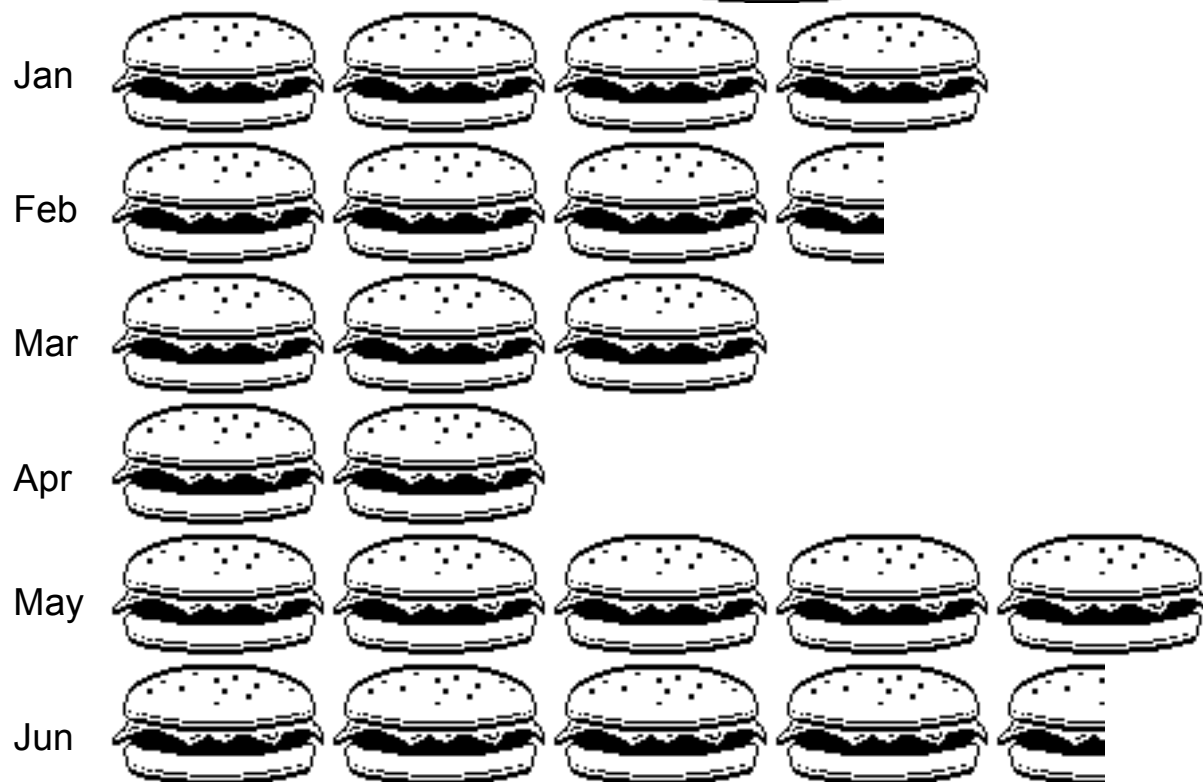
	Fraction	Decimal	Percent
13)	$\frac{3}{16}$		
14)			84%
15)		3.257	
16)			0.125%
17)	$\frac{1}{6}$		
18)		$0.\overline{2}$	

**Solve the following:**

- 19) What percent of  $7\frac{1}{5}$  is 27?                      20) 95 is 190% of what?
- 21) What is 0.16% of 0.8?                      22) 11 is what percent of 40000?
- 23) A dip requires 16 oz of cream cheese for every 12 oz of picante sauce. How much sauce is needed for 40 oz of cream cheese?
- 24) Juan earns \$350 a week. After a 4% raise, what is his new salary?
- 25) If the alternator-to-engine ratio is 57 to 20, what rpm will the alternator have if the engine is idling at 300 rpm?
- 26) Seventeen out of twenty-four customers of the Krusty Krab ordered a cup of coffee with their meal. What percentage (to the nearest tenth) of the customers had coffee with their meal?
- 27) In a given week, the Krusty Krab pays \$1260 in taxes on their profit. If the taxes represent 25% of their profit, what is their profit in a given week?
- 28) In a certain engine, the actual airflow is 87.6% of the theoretical airflow. If the theoretical airflow is 305 ft<sup>3</sup>/min, what is the actual airflow (to the nearest tenth)?
- 29) Plankton buys more land for \$50,000 for the Chum Bucket. If the Realtor's commission rate was 8%, how much did the Realtor get?
- 30) For a Catering Service, the cost of a 40-pound bag of flour decreased from \$9 to \$6.75. Find the percent decrease.
- 31) If Patrick Star can blow eleven huge bubbles every six minutes, about how many huge bubbles can he blow in twenty-five minutes?
- 32) The resistance of an electrical resistor is rated at 750 ohms. If the resistance can be off by as much as 8%, what is the maximum possible resistance of the resistor?
- 33) Giovanni Jones rehearses 50 hours a week in preparation for his singing performance. If it takes him 30 days to prepare for a performance, how many hours in total must he rehearse (round to the nearest hundredth)?
- 34) Leroy can buy a pack of four switches for \$6 or a pack of ten switches for \$14 or a pack of fifteen switches for \$22. Which is the best buy? If he needs sixty switches, how much will it cost him?

Use the graph below to answer the following questions:

**Number of Krabby Patties Sold** (  = 600 patties )



- 35) What percent of all patties sold in the first half of the year were sold in April (to the nearest percent)?

**Solve the following:**

- 36) Sponge Bob bought a spatula that was on sale for 30% off. The regular price was \$36 and at the cash register, Sponge Bob presented a membership card that entitled him to a 10% discount off the sale price of the spatula. How much did Sponge Bob pay for the spatula (assume the Krusty Krab is tax exempted).
- 37) For a wedding reception, Katz Katering Service needs to serve 66 pounds of cooked steak. If 17.5% of the weight of the steak is lost when it is cooked, how many pounds of uncooked steak should be ordered?
- 38) If a 40-gallon hot water heater holds 330 pounds of water, how many pounds of water can a 50-gallon hot water heater hold?

**Solve the following:**

- 39) A store advertises that they discount their jewelry by 50% off of the regular price. If Maria has a coupon that allows her to take an additional 50% of the sales price, find the net discount off the regular price she will receive.
- 40) If five pounds of cashews is mixed with ten pounds of peanuts, what percent of the mixture is made of peanuts?
- 41) Given  $\triangle ABC \sim \triangle DEF$ ,  $BC = 14$  cm,  $EF = 21$  cm,  $DF = 6$  cm, and  $AB = 12$  cm, find all the missing sides.
- 42) If a tree casts a shadow that is 15 feet long at the same time that a five-foot tall person casts 2.8-foot shadow, how tall is the tree to the nearest tenth of a foot?

**Answers:**

- 1)  $\frac{7 \text{ eggs}}{3 \text{ cakes}}$  2)  $\frac{4}{5}$  3)  $\frac{3}{4}$  4)  $\frac{19}{20}$  5)  $\frac{\$23}{40\text{oz}}$  6)  $\frac{27\text{rev}}{4\text{min}}$  7)  $\frac{28\text{mi}}{\text{gal}}$
- 8)  $\frac{\$0.3525}{\text{oz}}$  9)  $x = 27$  10)  $x = 6.4$  11)  $x = \frac{1}{6}$  12)  $x = 1.1$
- 13) 0.1875; 18.75% 14)  $\frac{21}{25}$ ; 0.84 15)  $3\frac{257}{1000}$ ; 325.7% 16)  $\frac{1}{800}$ ; 0.00125
- 17)  $0.1\bar{6}$ ;  $16.\bar{6}\%$  18)  $\frac{2}{9}$ ,  $22.\bar{2}\%$  19) 375% 20) 50 21) 0.00128
- 22) 0.0275% 23) 30 ounces 24) \$364 25) 855 rpm 26)  $\approx 70.8\%$
- 27) \$5040 28)  $\approx 267.2 \text{ ft}^3/\text{min}$  29) \$4000 30) 25%
- 31)  $\approx 46$  Huge Bubbles 32) 810 ohms 33)  $\approx 214.29$  hours
- 34) Ten switches for \$14; \$84 35)  $\approx 9\%$  36) \$22.68 37) 80 pounds
- 38) 412.5 pounds 39) 75% net discount 40)  $66\frac{2}{3}\%$  41)  $AC = 4$  cm,  $DE = 18$  cm
- 42)  $\approx 26.8$  ft