

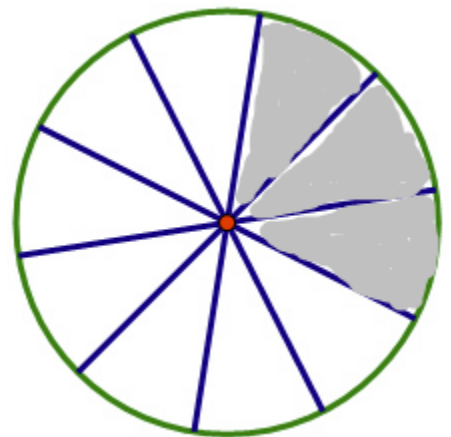
College Prep Math
Unit 2 Review: Rational Numbers

Name: _____

- 1) What is 314% of 13?
- 2) What is $\frac{1}{4} \div \frac{2}{5}$?
- 3) What is $100 - 22\frac{3}{5}$?
- 4) What is the approximate percent decrease when a deer population goes down from 750 to 400?
- 5) A sports team held a fundraiser last year and raised \$400 to help with team expenses. This year they raised \$530. What is the percent change in the total amount raised by the team?
- 6) The owner of a gym decides to increase the \$45 membership fee by \$12. What is the approximate percent increase in the fee?
- 7) The airline has a limit of 50 pounds per luggage one can bring onto the plane. Your luggage weighs 82% of the 50-pound capacity. How many pounds does your luggage weigh?

- 8) Luke has driven 43% of an hour-long drive. How many minutes has Luke driven?
- 9) Jessie wants to give a 20% gratuity to his uber driver. Her fare is \$24.75. What is the total amount she will pay the driver?
- 10) Jim and his friends went out for lunch and the bill came to \$98. Together they decided to also tip a total of 18% of the bill. Finally, they decided to split the total bill, including tip, amongst all 6 friends. How much did Jim spend?
- 11) Brianna's mom takes her and two other friends to the movies. She bought 3 large popcorns, each of which costs \$4.50. She also bought 4 fountain drinks for \$3 each. The movie tickets cost \$15 each (she bought 4). Finally, Brianna used a 20% off coupon for the total order. How much did Brianna's mom spend at the movies?

- 12) Express the shaded region as a fraction, percent, and decimal.



13) Reduce the fraction $\frac{5}{40}$.

14) Convert $\frac{3}{5}$ to a percent.

15) Holden wants to tip the waitstaff 20% of the bill for good service. If Holden's bill is \$28, how much tip should he leave for the waitstaff?

16) Siri wants to buy a \$41 shirt. At the register, she is charged 8.25% in sales tax. How much does Siri have to pay for the shirt, including tax?

17) 26 out of 30 students passed the last history test. Approximately what percent of students passed the test?

18) Convert 24% to a reduced fraction.

____ 19) A certain map has a scale in which $\frac{1}{4}$ inch on the map represents an actual distance of 100 feet. A distance of x feet is represented by how many inches on this map?

A. $\frac{x}{400}$

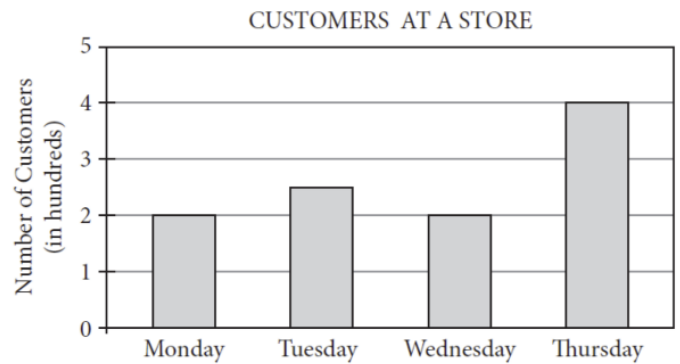
B. $\frac{x}{100}$

C. $25x$

D. $400x$

20) The bar graph shows the number of customers who shopped at a store Monday through Thursday of one week.

If the number of customers on Friday was a 40% increase from the number of customers on Thursday, how many customers shopped at the store on Friday?

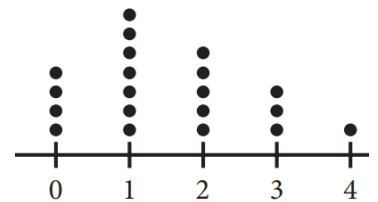


21) During a sale, the regular price of a smartphone is reduced by 20 percent. If the sale price is \$640.00, what is the regular price of the smartphone?

____ 22) A pair of headphones is on sale for 35 percent off the original price of x dollars. If a customer has a coupon for 10 dollars off the sale price, which of the following represents the price, in dollars, the customer will pay, excluding tax, for the headphones?

- A. $0.35x - 10$
- B. $0.65x - 10$
- C. $0.65(x - 10)$
- D. $10 - 0.65x$

23) The dot plot identifies the number of students present in each of 20 rooms. What fraction of rooms have more than 1 student?



24) Craig's weekly salary is \$435 plus 8% of weekly sales. Write an equation that expresses the relationship between Craig's salary s in terms of his weekly sales, w .

25) The tuition for one year at a college is \$3,700. If the tuition increases by 25%, what will be the new cost of tuition?