Name: Answer KEY\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class Period \_\_\_\_\_\_

**Unit 2: Rate, Ratio, Proportional Reasoning - STUDY GUIDE**

1) \_\_See ratio table-many solutions\_\_\_\_\_\_

2)\_\_\_\_\_\_30\_\_\_\_\_\_\_

3)\_\_\_\_\_\_\_\_6\_\_\_\_\_\_\_

4) \_\_\_\_\_\_220\_\_\_\_\_\_

5)\_\_\_\_\_\_49\_\_\_\_\_\_\_

6A)

Pink’s bracelets cost \_$2.03\_\_\_\_\_\_\_\_\_\_

6B)

Carrie’s bracelets cost \_\_\_\_$2.50\_\_\_\_\_

6C) Who has the better deal? \_\_\_\_Pink\_\_\_\_\_\_

1. Write an equivalent ratio to 6:7 (in other words…it simplifies to 6:7).

|  |  |  |
| --- | --- | --- |
| 6 | 12 | 18 |
| 7 | 14 | 21 |

1. Twelve is 40% of what number?

$\frac{is}{of}$ =$\frac{\%}{100}$

$$\frac{12}{x}=\frac{40}{100}$$

12x100=1200

1200÷40=30

OR

$$\frac{12}{x}=\frac{2}{5}$$

2x6=12

5x6= 30

÷÷

1. Find 15% of 40.

$\frac{is}{of}$ =$\frac{\%}{100}$

$$\frac{x}{40}=\frac{15}{100}$$

.15x40= 6

Or

15x4=600

600÷100=6

1. Determine the missing value. 

$$\frac{11}{20}=\frac{x}{400}$$

20x20=400

11x20=220

Or

11x400= 4400

4400$÷$ 20=220

1. Usher earned $12.25 for 2 hours babysitting his agent’s children, which he gave to charity.

One week he babysat them for 8 hours. How much did he make for charity that week?

$\frac{12.25}{2}$= $\frac{x}{8}$

2x8= 16

12.25x2=49

Or

12.25x8=98

98÷2= 49

1. Pink bought 15 bracelets for $30.45. Carrie Underwood bought 18 bracelets for $45.00.

Who got the better deal (**LOWEST** price per bracelet)? MUST SHOW ALL WORK!!!!! (Unit rate, divide by the denominator.

 **PINK CARRIE**

$\frac{price}{item}=$ $\frac{30.45}{15}$ = $\frac{x}{1} $ $\frac{price}{item}$ = $\frac{45.00}{18}$ =$\frac{x}{1}$

30.45÷15=$2.03 45.00 ÷18= $2.50

1. If 1 inch is approximately 2.54 centimeters, how many centimeters are

7) \_\_\_8.89cm\_\_\_\_\_\_

8)\_\_\_\_\_120\_\_\_\_\_\_\_

9)\_\_48 clowns\_\_

10) \_\_\_\_\_\_\_\_\_\_\_\_\_\_

equal in length to 3.5 inches?

$$\frac{2.54cm}{1 in}=\frac{x cm}{3.5in}$$

 1x3.5= 3.5

 2.54x3.5= 8.89cm

1. The table below shows the cost for varying number of iTune albums.

If the relationship stays the same, determine the value of *n*.

|  |  |
| --- | --- |
| Number of iTune albums | Cost |
| 4 x6 | $24 |
| 5x6 | $30 |
| 12x6 | $72 |
| 20x6 | *N=120* |

1. The ratio of clowns to acrobats in a show is 12:4.

If there are a total of 64 clowns **and** acrobats in the show, how many

are clowns?

Hint: Make sure you are comparing the same things. What do you need to do to 12 and 4? add

*12clowns+4acrobats=16 clowns and acrobats*

$\frac{12clowns}{16clowns and acrobats}$*=*$\frac{x clowns}{64 clowns and acrobats}$

*16x4=64*

*12x4=48*

1. The graph below compares cups to pints. Which of the following ordered

pairs would also satisfy this relationship?

 A) (4, 1) B) (8, 4)

 C) (8, 0) D) (1, 2)

11) \_\_\_\_$440\_\_\_\_

12) 2 hours 30 mins

13)\_\_\_55 miles\_\_\_\_

14) \_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Brandy’s paycheck last week was $2,000. She would like to put 22% of her

pay check in her savings account. How much money should she put in her

savings account?

$$.22 x 2000=440$$

$$or $$

$$\frac{x}{2000}=\frac{22}{100}$$

100x20=2000

22x20= 440

1. Jim drives his race car at a constant speed of 200 miles per hour.

Determine the number of hours it will take him to drive 500 miles.

$$\frac{200 miles}{1hour}=\frac{500 miles}{x hours}$$

500$÷$200= 2.5 hours

1. Sally drove 660 miles in 12 hours. How many miles did she drive per hour?

$$\frac{660miles}{12hours}=\frac{x miles}{1hour}$$

12÷12=1

660÷12=55 miles

1. Mr. Hague surveyed his students to determine their favorite summer sport.

The results are shown in the table below.

**What percent of the students surveyed chose Football?**

|  |  |  |
| --- | --- | --- |
| Sport | Boys | Girls |
| Football | 75 | 7 |
| Soccer | 25 | 93 |

$$\frac{82girls and boys who chose football}{200totalstudents}=\frac{x\%}{100}$$

 200÷2=100

 82$÷$2= 41

Hint: How many total students are there? 200 41%

 What are percent’s out of?100

15. In a class of 30 students, 20% returned their permission slips for the

15) \_\_6 Students\_\_

16)\_\_\_40%\_\_\_\_\_\_\_

17A) How fast did Jerrod driver per hour?

\_\_62 miles per hour\_\_\_

17B) How fast did Martin drive per hour?

\_\_61 miles per hour\_\_

17) Who drove faster?

 \_\_\_Jerrod\_\_\_\_\_

 school field trip. How many students returned their permission slips?

$$\frac{x}{30students}=\frac{20\%}{100}$$

$$\frac{x}{30students}=\frac{1}{5}$$

5x6=30

1x6=6

16. Pine Mountain Middle School held a car wash as a fundraiser.

Out of the 25 vehicles that were washed, 10 were cars.

What percent of the vehicles were cars?

$$\frac{10 cars}{25 vehicles}=\frac{x\%}{100}$$

**25x4=100**

**10x4=40**

**0r**

**10÷25=.4**

**.4x100=40%**

17. Jerrod drove 217 miles in 3.5 hours.

 Martin drove 244 miles in 4 hours.

 Who drove at the **FASTEST** rate of speed? MUST SHOW ALL WORK!

**Jerrod**

$$\frac{217miles}{3.5 hours}=\frac{xmiles}{1hour}$$

**3.5÷3.5=1**

**217÷3.5= 62**

**Martin**

$$\frac{244miles}{4 hours}=\frac{xmiles}{1hour}$$

**4**$÷4=1$

**244÷4= 61**