Adv Math 6 - Unit 2: Ratios, Rates, Proportions   Name: _____

End of Unit Test Study Guide

Answer the following questions. You may use a separate sheet of paper, but your questions must be numbered and final answers must be circled or boxed in. Show ALL work to get full credit.

1) What is the difference between a rate and a unit rate?	2) Is $\frac{12}{18} = \frac{5}{8}$ a proportion? Why or why not? How do you know?
3) Fill in the missing values in the ratio table:	4) 19 is 20% of what number?
5) Find 30% of 400.	6) Determine the missing value: $\frac{25}{15} = \frac{x}{9}$
7) Write the rate as a unit rate (including units): $31.50 for 9 tickets	8) Maren drove 245 miles in 3.5 hours. Donika drove 427 miles in 7 hours. Who drove at the fastest rate of speed? Justify your answer:
9) Ephraim the Snake is 3 feet long. Asia the Fish is 49 inches long. How much longer is Asia than Ephraim?	10) The table below shows the number of tickets sold for each movie. What does the ratio 5:3 represent?

For question 3, ratio table:

5	15		100
	9	27	

For question 10, table:

Item	Avengers	Thor	Captain America	Spider Man
Quanti ty Sold	12	15	30	18

11) The table below shows the cost for varying numbers of meals at a local restaurant.

If the ratio stays the same, determine the value of n.

Number of Meals	Cost
3	$36
5	$60
12	$144
20	n

12) The ratio of red to blue socks in a drawer is 8:12. If there are 80 socks in the drawer, how many are blue?

13) There are 80 people eating in a Chinese restaurant. If 25% of these people did **NOT** order an eggroll, **how many people did** order an eggroll?

14) David deposited $312 in the bank last week. If this was 20% of his paycheck, how much was his paycheck?

15) Mrs. Katz is saving for a beach vacation. She needs to save $3,500.

If she has only saved 30% of that amount, how much has she saved?

16) The prices of 3 different bottles of salad dressing are given in the table.

Which size bottle is the BEST value, according to the price per ounce?

Size	Price
20 oz.	$4.20
15 oz.	$2.25
5 oz.	$0.90

17) To make Tennessee Orange, you need to mix 2 parts of red paint with 4 parts of yellow paint. If you have 13 oz of red paint, how many oz of yellow paint do you need?

18) Fifty liters of fruit punch were served at a party. If there are 1000 liters in a kiloliter, how many kiloliters were served?

19) If you spend $30 on dinner out and want to leave a 20% tip for good service, what would your total bill be?

20) If a store sells a shirt for $16 and you have a 20% off coupon, how much would you pay for the shirt before taxes?

Adv Math 6 - Unit 2: Ratios, Rates, Proportions   Name: _____

End of Unit Test Study Guide
ANSWER KEY

Class Period: 1   2   3   4   Date: _____

Answer the following questions. You may use a separate sheet of paper, but your questions must be numbered and final answers must be circled or boxed in. Show ALL work to get full credit.

---

1) What is the difference between a rate and a unit rate?

   Unit rates require that one of the units be 1.

2) Is $\frac{12}{18} = \frac{5}{8}$ a proportion? Why or why not? How do you know?

   No, they don't simplify down to the same ratio and if you cross multiply, you get different sums.

---

3) Fill in the missing values in the ratio table:

5	15	**45**	100
3	9	27	**60**

4) 19 is 20% of what number?

   95

---

5) Find 30% of 400.

   120

6) Determine the missing value: $\frac{25}{15} = \frac{x}{9}$

   X = 15

---

7) Write the rate as a unit rate (including units):
   $31.50 for 9 tickets

   $3.50 per ticket
   or
   $3.50 for one ticket

8) Maren drove 245 miles in 3.5 hours. Donika drove 427 miles in 7 hours.

   Who drove at the fastest rate of speed?
   Maren

   Justify your answer: **Maren drove more miles in an hour than Donika.**

---

9) Ephraim the Snake is 3 feet long. Asia the Fish is 49 inches long.

   How much longer is Asia than Ephraim?

   13 inches longer

10) The table below shows the number of tickets sold for each movie.

   What does the ratio 5:3 represent?

Item	Avengers	Thor	Captain America	Spider Man
Quanti ty Sold	12	15	30	18

   None

11) The table below shows the cost for varying numbers of meals at a local restaurant.

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

Number of Meals	Cost
3	$36
5	$60
12	$144
20	**n = $240**

12) The ratio of red to blue socks in a drawer is 8:12. If there are 80 socks in the drawer, how many are blue?

48 blue socks in the drawer.

13) There are 80 people eating in a Chinese restaurant. If 25% of these people did **NOT** order an eggroll, **how many people did** order an eggroll?

60 people did order an eggroll.

14) David deposited $312 in the bank last week. If this was 20% of his paycheck, how much was his paycheck?

His paycheck was $1560.

15) Mrs. Katz is saving for a beach vacation. She needs to save $3,500.

If she has only saved 30% of that amount, how much has she saved?

She saved $1050.

16) The prices of 3 different bottles of salad dressing are given in the table.

Which size bottle is the BEST value, according to the price per ounce?

Size	Price
20 oz.	$4.20
15 oz.	$2.25
5 oz.	$0.90

The 15 oz. Bottle is the better deal.

17) To make Tennessee Orange, you need to mix 2 parts of red paint with 4 parts of yellow paint. If you have 13 oz of red paint, how many oz of yellow paint do you need?

You would need 26 oz of yellow paint.

18) Fifty liters of fruit punch were served at a party. If there are 1000 liters in a kiloliter, how many kiloliters were served?

0.05 kL were served.

19) If you spend $30 on dinner out and want to leave a 20% tip for good service, what would your total bill be?

Your total bill would be $36.

20) If a store sells a shirt for $16 and you have a 20% off coupon, how much would you pay for the shirt before taxes?

You would pay $12.80.