Ratios, Proportions, and Percents Unit Review

Multiple Choice – choose the best answer
1. Which of the following is not the way you write the ratio of a to b?
    a. a:b
    b. $\frac{a}{b}$
    c. Ratio of a to b
    d. Ratio of b to a

2. For every arm a person has, they have a leg. Which ratio represents this situation?
    a. 1: 1
    b. 2:2
    c. 2 to 2
    d. 4 to 4

Use the table at the right to answer questions 3 through 6.
3. What is the ratio of pandas to gorillas at the zoo?
    a. 5:2
    b. 2:2
    c. 2:5
    d. 2:15

Animals at the Zoo	Number
Panda	2
Snow Leopard	2
Spider Monkey	15
Anteater	3
Gorillas	5

4. There is one animal for every one of this animal. Which animals are they?
    a. Pandas and spider monkeys
    b. Pandas and snow leopards
    c. Pandas and anteaters
    d. Gorillas and anteaters

5. What is the ratio of spider monkeys to anteaters?
    a. 1:2
    b. 1:3
    c. 5:1
    d. 1:5
6. What is the ratio of snow leopards to all the animals listed in this table?
    a. 2:25
    b. 2:27
    c. 25:2
    d. 27:2

7. The following are equivalent to $\frac{10}{12}$ except:
   a. 5: 6
   b. 100: 120
   c. 6:5
   d. Ratio of .1 to .12

8. Which ratio is not equivalent to $\frac{1}{6}$?
   a. 2:12
   b. 10:60
   c. $\frac{5}{25}$
   d. 20:120

9. The ratio of boys to girls in the school is 1 to 4. If there are 20 girls, how many boys are there?
   a. 5
   b. 10
   c. 20
   d. 80

10. What value is x?

1	2	3	4	5
4	8	12	x	20

   a. 10   c. 16
   b. 14   d. 18

11. What value is x?

2	4	8	10	12	14
3	6	12	x	18	21

   a. 13
   b. 14
   c. 15
   d. 16

12. Cindy drove 975 miles in 15 hours. How many miles per hour did she drive?
    a. 15 miles per hour
    b. 55 miles per hour
    c. 65 miles per hour
    d. 975 miles per hour

13. Kevin bought 15 bananas for $4.50. How much does 1 banana cost?
    a. $3.33
    b. $0.25
    c. $0.30
    d. $0.35

14. Bill bought 15 oz. of fish for $11.85. How much does the fish cost per ounce?
    a. $0.69
    b. $0.79
    c. $1.45
    d. $1.78

15. How many inches are in 4.5 feet?
    a. 12 inches
    b. 48 inches
    c. 54 inches
    d. 60 inches

16. If Sandy ran 2 5k races, how many miles did she run? A 5k race is 5km long. 1 mi = 1.6 km
    a. 3.1 miles
    b. 5 miles
    c. 6.3 miles
    d. 10 miles

17. Chauncey weighs 52 kg. What is his weight in pounds? 1 lb = 0.45 kg.
    a. 23.4 lbs
    b. 100 lbs
    c. 115.6 lbs
    d. 120 lbs

18. What is 30% of 20?
    a. 2
    b. 4
    c. 6
    d. 8

19. What is 120% of 50?
    a. 12
    b. 15
    c. 50
    d. 60

20. 60 is 30% of what number?
    a. 18
    b. 20
    c. 180
    d. 200

Short Constructed – write the answer

21. How many feet are in 35 yards?

22. Karen ran 3.5 miles on Wednesday and 2.5 miles on Thursday. How many feet did she run in total?

23. What is 3 cups and 4 ounces multiplied by 4?

24. What is 2 feet and 5 inches multiplied by 3?

25. What is 3 miles and 4,221 feet divided by 3?

26. What is 2 gallons and 2 quarts multiplied by 2?

Find the equivalent rate.

27. $\frac{20\ mi}{1\ min} = \frac{x}{1\ hour}$

28. $\frac{\$350}{1\ week} = \frac{x}{1\ day}$

29. $\frac{5\ seconds}{10\ cans} = \frac{1\ min}{x}$

30. $\frac{1\ month}{15\ inches} = \frac{1\ year}{x}$

Change the percent into fraction form.

31. 81%

32. 50%

33. 45%

34. 90%

Change the fraction into percent form.

35. $\frac{1}{5}$

36. $\frac{7}{10}$

37. $\frac{4}{25}$

38. $\frac{9}{20}$

Change into percent or decimal.

39. 0.93

40. 52.4%

41. 1.22

42. 0.91%

Extended Constructed Response – answer all parts.

43. Michelle has marbles in a bag. She has 4 pink marbles, 10 blue marbles, 2 clear marbles, 5 green

marbles, and 6 red marbles.

a. What is the ratio of clear marbles to blue marbles?

b. What is the ratio of green marbles to blue marbles?

c. What is the ratio of pink marbles to total marbles?

44. George surveyed the sixth grade at his school and found that 40% preferred pizza over sandwiches as

their lunch.

a. 80 students picked pizza, how many students are in the 6th grade?

b. If 160 students picked pizza, then how many students are in the 6th grade?

c. George surveyed the 7th grade and found that 60% preferred pizza over sandwiches. How many

students are in the 7th grade if 120 students picked pizza?

45. Kate went shopping with her mom. She bought a shirt that was on sale for 10% off. She saved $5.00.

What was the original price of the shirt?