Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class:\_\_\_\_\_\_\_\_\_\_\_\_\_

**6th Grade Unit 2: Ratios & Proportional Relationships Post Test**

\_\_\_\_\_\_\_\_1. A bakery sells 3 apple muffins for every 4 bran muffins sold. Which table shows this ratio?

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A.   |  |  | | --- | --- | | **Apple** | **Bran** | | 3 | 4 | | 6 | 7 | | 9 | 10 | | B.   |  |  | | --- | --- | | **Apple** | **Bran** | | 3 | 4 | | 6 | 8 | | 12 | 24 | |
| C.   |  |  | | --- | --- | | **Apple** | **Bran** | | 3 | 4 | | 9 | 12 | | 18 | 24 | | D.   |  |  | | --- | --- | | **Apple** | **Bran** | | 3 | 4 | | 6 | 12 | | 12 | 24 | |

\_\_\_\_\_\_\_\_2. A fruit stand has 18 red apples. This is 40% of the total apples in the stand. How many apples are there in the stand?

1. 7.2 apples
2. 45 apples
3. 72 apples
4. 4.5 apples

\_\_\_\_\_\_\_\_3. What is 30% of 150?

1. 45
2. 4.5
3. 450
4. 0.45

\_\_\_\_\_\_\_\_4. Lindsey bought 5 apples for $10.00. How much is each apple?

1. $0.02
2. $0.20
3. $2.00
4. $20.00

\_\_\_\_\_\_\_\_5. Five of the 25 girls on Alden Middle School’s soccer team are seventh-grade students. Find the percentage of seventh graders on the team.

1. 30%
2. 25%
3. 20%
4. 10%

\_\_\_\_\_\_\_\_6. The value 3.84 is 12% of what number?

1. 0.03125
2. 3.125
3. 32
4. 3.2

\_\_\_\_\_\_\_\_ 7. The ratio of students to adults on a field trip is 9 to 1. Which table correctly shows this ratio for each grade?

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A.   |  |  |  | | --- | --- | --- | | **Grade** | **Number of Students** | **Number of Adults** | | 6 | 54 | 9 | | 7 | 63 | 9 | | 8 | 72 | 9 | | B.   |  |  |  | | --- | --- | --- | | **Grade** | **Number of Students** | **Number of Adults** | | 6 | 90 | 10 | | 7 | 135 | 15 | | 8 | 153 | 17 | |
| C.   |  |  |  | | --- | --- | --- | | **Grade** | **Number of Students** | **Number of Adults** | | 6 | 90 | 104 | | 7 | 135 | 128 | | 8 | 153 | 144 | | D.   |  |  |  | | --- | --- | --- | | **Grade** | **Number of Students** | **Number of Adults** | | 6 | 96 | 11 | | 7 | 120 | 13 | | 8 | 136 | 15 | |

\_\_\_\_\_\_\_\_ 8. The table below shows different possibilities for the number of games a team would need to win to maintain a certain percentage of wins.

|  |  |
| --- | --- |
| **Number of Games Won** | **Number of Games Played** |
| 6 | 10 |
| 24 | 40 |
| 36 | 60 |
| 42 | 70 |

Which ratio of the number of games won to the number of games played could also be included in this table?

1. 18:20
2. 30:20
3. 18:30
4. 50:30

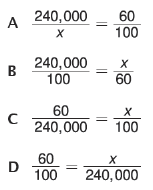
**\_\_\_\_\_\_\_\_** 9.Last year, Chelsea made 64 one-cup servings of soup for a school party. This year, she will make two times the amount of soup that she made last year. How many gallons of soup will Chelsea make this year?

1. 128
2. 32
3. 8
4. 4

\_\_\_\_\_\_\_\_10. Because Christian likes to help his uncle work on cars, his uncle gives him 15% of all of the money he makes fixing cars. Christian’s uncle made $300.00 fixing the engine on a Dodge Ram 1500 pickup truck. How much of that money will Christian get?

1. $45.00
2. $4.50
3. $450.00
4. $18.00

\_\_\_\_\_\_\_\_ 11. A salesperson had $240,000 in sales last year, which is 60% of the sales that she had this year. Which equation could be used to determine, x, the salesperson’s total amount of sales, in dollars, for this year?



\_\_\_\_\_\_\_\_12. Keon’s mother drove 72 miles in 2 hours. How many miles per hour did Keon’s mother drive?

1. 36 miles per hour
2. 18 miles per hour
3. 1.8 miles per hour
4. 3.6 miles per hour

\_\_\_\_\_\_\_\_13. Use the chart below to answer question 15.

|  |  |
| --- | --- |
| **Exhibits by Animal Class** | **Number of Exhibits** |
| Mammals | 30 |
| Reptiles & Amphibians | 15 |
| Fish & Insects | 12 |
| Birds | 3 |

There are 60 animal exhibits at the local zoo. What percent of the zoo’s exhibits do Reptiles & Amphibians represent?

1. 50%
2. 25%
3. 20%
4. 5%

\_\_\_\_\_\_\_\_14. Mr. Warnock replaced 20% of the school’s computers with new ones. What is the total number of computers in the school if 55 computers were replaced?

1. 75
2. 110
3. 275
4. 2,750

\_\_\_\_\_\_\_\_15. In September, Kim was able to read 15 pages in 20 minutes. At that rate, how many pages can Kim read in 1 hour?

1. 45 pages
2. 4.5 pages
3. 450 pages
4. 0.75 pages

\_\_\_\_\_\_\_ 16. In 2012, Jerry earned $16.50 for 2 hours of work. Which table shows the relationship between the number of hours worked and Jerry’s total earnings, if the rate per hour is constant?

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A.   |  |  | | --- | --- | | Number of Hours | Total Earnings | | 1 | $16.50 | | 2 | $33.00 | | 3 | $49.50 | | 4 | $66.00 | | B.   |  |  | | --- | --- | | Number of Hours | Total Earnings | | 1 | $16.50 | | 2 | $17.50 | | 3 | $18.50 | | 4 | $19.50 | |
| C.   |  |  | | --- | --- | | Number of Hours | Total Earnings | | 1 | $16.50 | | 2 | $16.50 | | 3 | $16.50 | | 4 | $16.50 | | D.   |  |  | | --- | --- | | Number of Hours | Total Earnings | | 1 | $8.25 | | 2 | $16.50 | | 3 | $24.75 | | 4 | $33.00 | |

\_\_\_\_\_\_\_\_17. A 28 oz. box of Captain Crunch cereal costs $3.36. How much is each ounce of cereal?

1. $1.20
2. $0.12
3. $2.10
4. $0.21

\_\_\_\_\_\_\_\_18. On your math test you got 24 correct out of 40. What percentage is this?

1. 40%
2. 6%
3. 4%
4. 60%

\_\_\_\_\_\_\_\_19. Mrs. Kirrane bought three of the same shirt and paid $63.00 after the 30% discount. What was the original price of ONE of the shirts?

1. $30.00
2. $18.90
3. $44.10
4. $21.00

\_\_\_\_\_\_\_\_20. Solanje, Ineires, and Jayleen wanted to buy the same shoes to wear for Twin Day at school. The girls decided to buy pink Chuck Taylor sneakers. The sneakers cost $40.00 each plus 8% sales tax. They purchased 3 pairs of sneakers. What was the total cost of all 3 sneakers with tax?

1. $48.00
2. $144.00
3. $43.20
4. $129.60

**\_\_\_\_\_\_\_\_** 21. The area of an airplane’s wings is related to the airplane’s lifting force, which holds the airplane in the air. The table below lists several wing areas and the corresponding lifting forces.

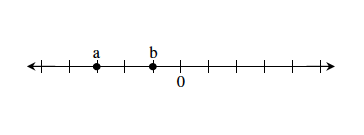
|  |  |
| --- | --- |
| **Area of Wings**  **(square feet)** | **Lifting Force**  **(pounds)** |
| 125 | 1,875 |
| 150 | 2,250 |
| 175 | 2,625 |
| 250 | 3,750 |
| x | 5,625 |
| 420 | y |

1. x = 375 square feet and y = 7,500 pounds
2. x = 335 square feet and y = 7,500 pounds
3. x = 375 square feet and y = 6,300 pounds
4. x = 335 square feet and y = 6,300 pounds

\_\_\_\_\_\_\_\_22. Vanessa took a road trip to see some of her friends in Boston last weekend. She drove 210 miles in 3.5 hours. Latoya also took a road trip last weekend to see her friends in Philadelphia. She drove 130 miles in 2 hours. About 90 minutes into her drive, Latoya passed signs for Atlantic City. Which of these girls drove faster?

1. Vanessa drove 5 mph faster than Latoya
2. Vanessa drove 5 mph slower than Latoya
3. Latoya drove 5 mph slower than Vanessa
4. Vanessa and Latoya drove at the same speed

\_\_\_\_\_\_\_\_23. A principal was told that 53% of the students in his school scored proficient on the Math test. If 318 students scored proficient, how many students are there in the school?

1. 168 students
2. 600 students
3. 6000 students
4. 371 students

\_\_\_\_\_\_\_\_24. Which inequality represents the comparison of the two numbers plotted on the number line below?

1. a < b
2. b < a
3. a > b
4. a = b

**\_\_\_\_\_\_\_\_** 25.Debbie’s dog eats 4 ounces of dog food each day. Debbie bought a 14-pound bag of dog food. How many 4-ounce servings are in a 14-pound bag of dog food?

1. 14
2. 56
3. 224
4. 448

\_\_\_\_\_\_\_\_26. Jamie and Alayna went to Capri’s Pizza to grab a late lunch after school. The total cost of their lunch was $14.00. Alayna had a 25% off coupon. How much did their lunch cost after the discount?

1. $3.50
2. $10.50
3. $13.65
4. $13.75

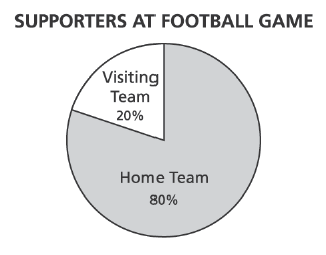
\_\_\_\_\_\_\_\_27. Kristina and Stephanie each decided to buy some snacks for a school party. Kristina bought a 64-ounce bag of potato chips for $3.84 at C-Town. Stephanie bought an 80-ounce bag of potato chips for $4.00 at Walgreens. How much did Kristina’s bag cost per ounce?

1. $0.60/ounce
2. $0.06/ounce
3. $0.50/ounce
4. $0.05/ounce

\_\_\_\_\_\_\_\_28. In Ty’s math class 15 students received an A. If there are 25 students in Ty’s class, what percentage of students did not receive an A?

1. 60%
2. 15%
3. 40%
4. 50%

\_\_\_\_\_\_\_\_ 29. The diagram below shows the percentages of people attending a football game who were supporters of the home team or the visiting team.



If the total number of people attending the game was 64,000, how many people were supporters of the home team?

1. 12,800
2. 38,400
3. 48,000
4. 51,200

\_\_\_\_\_\_\_\_ 30. Kim rode her bicycle 135 miles in 9 weeks, riding the same distance each week. Eric rode his bicycle 102 miles in 6 weeks, riding the same distance each week. Which statement correctly compares the number of miles per week they rode?

1. Eric rode 2 more miles per week than Kim rode
2. Kim rode 3 more miles per week than Eric rode
3. Kim rode 11 more miles per week than Eric rode
4. Eric rode 17 more miles per week than Kim rode

\_\_\_\_\_\_\_\_ 31. Arnold’s entire workout consisted of 10 minutes of warm-up exercises, 25 minutes of lifting weights, and 15 minutes on the treadmill. What was the ratio of the number of minutes he lifted weights to the total number of minutes of his entire workout?

1. 1:1
2. 1:2
3. 3:10
4. 5:8

\_\_\_\_\_\_\_\_ 32. Wyatt hiked 6 miles in 2 hours. At this same rate, what is the total number of miles Wyatt could hike in 9 hours?

1. 3 miles
2. 7 miles
3. 21 miles
4. 27 miles

\_\_\_\_\_\_\_\_ 33. A group of students organized a car wash to raise money for a local charity. The students charged $5.00 for each car they washed. In 3 hours, they washed 12 cars. At that rate, how much money could they earn from washing cars for eight hours?

1. $40.00
2. $60.00
3. $85.00
4. $160.00

\_\_\_\_\_\_\_\_ 34. There are 8 apples and 12 bananas in a fruit basket. What is the ratio of bananas to apples?

1. 8:12
2. 4:3
3. 3:2
4. 2:3

\_\_\_\_\_\_\_\_ 35. The water level in an ocean bay changes at an average rate of 3 meters per hour. At this rate, how many hours would it take for the water level to change 12 meters?

1. 1/4
2. 1/3
3. 4
4. 36