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| **RATIO AND PROPORTIONS**  **STUDY GUIDE, Page 1** |

1. **A board game has several green and blue pieces. The ratio of green game pieces to total pieces is 5:12.**

**Select all the statements that are correct about the game pieces.**

1. **The ratio of green pieces to blue pieces is 7:5**
2. **The ratio of total pieces to blue pieces is 12:7**
3. **There must be 7 more blue pieces than green pieces**
4. **The ratio of total pieces to green pieces is 12:5**
5. **Carl can type 180 words in 2 minutes. How many words can Carl type in 1 minute?**
6. **Carl types 160 words in 8 minutes. Enter the number of minutes it will take Carl to type 230 words?**

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| **RATIO AND PROPORTIONS STUDY GUIDE, Page 2** |

1. **This table shows a relationship between the number of tennis balls that fit into a given number of cans.**

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| **CANS** | **BALLS** |
| **1** | **3** |
|  | **12** |
| **7** | **21** |
| **13** |  |
|  | **45** |
| **27** |  |

**Fill in the missing values to complete the table.**

1. **The ratio of “x” to “y” is 1/4. All values of “x” and “y” are whole numbers less than 100.**

|  |  |
| --- | --- |
| **X** | **Y** |
|  |  |
|  |  |
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**Fill in the above table with numbers to form a table with the given ratio.**

1. **What is 60% of 18, rounded to the nearest whole number?**

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| **RATIO AND PROPORTIONS STUDY GUIDE, Page 3** |

1. **Enter the unknown value that makes this statement true.**

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**30% of is 60**

1. **Janet correctly answers 45 questions on her science test. There are 50 questions on the test.**

**Enter the percent of the questions that Janet answers incorrectly.**

1. **Enter the unknown value that makes this statement true.**

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**20 is % of 50**

1. **Enter the unknown value that makes this statement true.**

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**65% of 400 is**

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| **RATIO AND PROPORTIONS STUDY GUIDE, Page 4** |

**11. In a school with 200 students, 45% are male. Select all expressions that demonstrate a correct method to calculate the total number of male students.**

**a) 45 × 200 c) 0.45 × 200**

**100**

**b) 0.45 × 200 d) 45 × 200**

**100 10**

**12. Thomas wants to purchase some new music on iTunes, so he buys 4 new albums for a total cost of $49.28. What will be the total cost if Thomas wants to buy 1 more album?**

**a) $49.28 c) $61.60**

**b) $12.32 d) $51.60**

**13. If Maria has 7 quarters, 5 dimes, 13 nickels, and 11 pennies, which ratios below are accurately stated?**

1. **The ratio of dimes to pennies is, 5 – 11**
2. **The total of brown coins to silver coins is, 11:25**
3. **The ratio of pennies to quarters is, 7:11**
4. **The ratio of quarters to total coins is 7 to 36**
5. **The ratio of single digit coins to double digit coins is, 23:12**
6. **The ratio of nickels to quarters is, 7/13**

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| **RATIO AND PROPORTIONS STUDY GUIDE, Page 5** |

**14. David went to the farmer’s market in San Pedro and bought 3 churros for $2.01. He then went to the swap meet on Saturday and bought 5 churros for $3.20. Which location is the better buy for David?**

**15. The bakers at Acacia Bakery can make 280 bolillos in 4 hours. How many bolillos can they bake in 14 hours? And what is the rate of bolillos per hour?**

**16. You can buy 5 cans of paint that are both primer and paint at Home Depot for $281.25, but you will need 8.5 cans of paint to finish painting the exterior of the house. How many cans of paint will you purchase? What is the total cost of paint?**

**17. The Ferris wheel at Knott’s Berry Farm’s Camp Snoopy can accommodate 40 people in 25 minutes. How many people could ride the Ferris wheel in 3 hours? What is the rate per hour?**

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| **RATIO AND PROPORTIONS STUDY GUIDE, Page 6** |

**18. A small Cesna airplane taking off from Zamperini Field in Torrance travels 240 miles in 2 hours. At his rate how far could the jet travel in 11 hours?**

**19. A jar contains 94 marbles, of which 6 are blue, 32 are red, 16 are yellow, 8 black, and the rest are green. What is the ratio of green marbles to black marbles?**

**20. A jar contains 1260 beans. Of them, 280 are kidney beans, 320 are garbanzo beans, 180 are green beans, 260 are pinto beans, and the rest are navy beans. What is the ratio of kidney beans to all the beans?**

**21. If Ralph can mimic 56 dinosaurs in 3 minutes and Abraham can mimic 150 dinosaurs in 8 minutes. Which child can mimic dinosaurs at a faster rate? What is the rate per minute for each child?**

**22. A truck is carrying apple juice, grape juice, and orange juice bottles in a ratio of 2:3:3. If there are 48 grape juice bottles, then how many bottles in total are there?**

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| **RATIO AND PROPORTIONS STUDY GUIDE, Page 7** |

**Performance Task: Create a ratio table to answer the following prompt:**

**Dana works for New York’s Fresh Water Company, and bottles water during the day. His manager asks him to bottle the remaining 1,512 bottles of water, but he does not know whether to put them in 12-packs, 18-packs, 24-packs, or 36-packs. Please help Dana decide how many packs he would create for each of the different packs available.**