**Ch. 1 Study Guide: Ratios and Rates**

**Write the letter for the correct answer in the blank at the right of each question.**

**1.** One bus leaves a stop every 9 minutes. A second bus leaves the stop every 15 minutes. If they both leave at 1:25 P.M., at what time will they next leave together?

**A.** 1:40 P.M. **B.** 1:49 P.M. **C.** 2:10 P.M. **D.** 2:25 P.M.

**2.** In an art class, there are 32 pens to 40 brushes. What is the ratio of pens to brushes written as a fraction in simplest form?

**F.**  **G.**  **H.**  **I.**

**3.** The table shows the number of votes each student received for class president. What is the ratio of votes for Hatim to the total number of votes?

|  |  |
| --- | --- |
| **Students Class Presidential Votes** | |
| **Candidate** | **Number of Votes** |
| Brown | 15 |
| Shui | 29 |
| Hatim | 16 |

**A. B. C. D.**

**For Exercises 4 and 5, what is each rate written as a unit rate?**

**4.** 180 miles on 6 gallons

**F. G. H. I.**

**5.** $120 for 15 books

**A. B. C. D.**

**6.** It took Cedric 42 minutes to jog 12 laps. At this rate, how many minutes did it take to jog each lap?

**F.** 2.28 min **G.** 3.5 min **H.** 4 min **I.** 4.5 min

**7.** Julia can type 150 words in 5 minutes. At this rate, how many words can she type in 1 minute?

**A.** 30 words **B.** 40 words **C.** 50 words **D.** 60 words

**1.** \_\_\_\_\_\_\_\_\_\_\_\_\_

**2.** \_\_\_\_\_\_\_\_\_\_\_\_\_

**3.** \_\_\_\_\_\_\_\_\_\_\_\_\_

**4.** \_\_\_\_\_\_\_\_\_\_\_\_\_

**5.** \_\_\_\_\_\_\_\_\_\_\_\_\_

**6.** \_\_\_\_\_\_\_\_\_\_\_\_\_

**7.** \_\_\_\_\_\_\_\_\_\_\_\_\_

**For Exercises 8 and 9, use the ratio table given to solve each problem.**

**8.** A hair salon bought 12 headbands for $24. At this rate, how much will 48 headbands cost?

|  |  |  |
| --- | --- | --- |
| **Headbands** | 12 | 48 |
| **Cost ($)** | 24 |  |

**F.** $24 **G.** $48 **H.** $60 **I.** $96

**9.** There are 8 boxes, which contain a total of 56 sweaters, in a store warehouse.  
If the store needs 35 sweaters, how many boxes should they take?

|  |  |  |  |
| --- | --- | --- | --- |
| **Sweaters** | 56 |  | 35 |
| **Boxes** | 8 |  |  |

**F.** 4 boxes **G.** 5 boxes **H.** 7 boxes **I.** 9 boxes

**10.** For a class trip, 114 students are put on 4 buses. At this rate, how many students would be on 8 buses?

**11.** While hiking, Mr. Finds burns 808 Calories in 8 hours. At this rate, how many Calories does he burn in 60 minutes?

**12.** Margo won 24 out of her last 36 tennis matches. At this rate, predict how many matches she would win out of her next 27 matches?

**13.** A store manager orders T-shirts so that 15 out of every 35 are a medium. How many medium T-shirts would you expect to find when there are 126 T-shirts   
on a rack?

**14.** Mia saves $28 in 8 weeks. Her sister saves $18 in 24 days. Are the rates at which each sister saves equivalent? Explain your reasoning.

**15.** Luke can read 4 pages in 1 minute. Write the ordered pairs (number of minutes, number of pages read) for Luke reading 0, 1, 2, and 3 minutes.

**8.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**9.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**10.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**11.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**12.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**13.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**14.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**15.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_