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| Year  8 | Mathematics Practice Test –  Ratio and Rates | **Calculator Practice Test** |
|  | Name |  |



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| 1. | What is the ratio of shaded sections to unshaded sections in the figure shown ? |
|  | Questions 2 -4 refer to the diagram of a group of people on a bus trip.  MEN  WOMEN |
| 2. | The ratio of men to women is :  8 : 9 8 : 17 9 : 8 9 : 17 |
| 3. | What is the ratio of men to the whole group? |
| 4. | If three more women joined the group, what is the new ratio of women to men? |
| 5. | Kayla has a collection of 60 movies which are in three categories, horror, comedy and romance. If she has 25 horror movies and 18 comedy movies, then the ratio of  Horror movies : Comedy movies : Romance movies is;  25 : 18 : 60 25 : 18 : 17 17 : 18 : 25 25 : 17 : 18 |
| 6. | Rahda finds that  of her class are right handed and the remainder are left handed. The ratio of right to left handed in the class is;  3 : 1 3 : 4 4 : 3 4 : 1 |
|  | Questions 7 – 9 refer to the information below on mixing paint using toners.  In mixing **one litre** of *Kahki Green* paint, the store adds the following toners.  20 mL of Cyan.  13 mL of Yellow  7 mL of Magenta |
| 7. | Complete the ratio below of the toners for *Kahki Green*.    Cyan : Magenta : Yellow |
| 8. | To mix **4 litres** of *Kahki Green*, how many mL of Yellow toner is needed?  mL. |
| 9. | To mix **20 litres** of *Kahki Green* paint, how much toner in total (of all colours) would be added?  40 mL 400 mL 160 mL 800 mL |
| 10. | Which ratio is **not** equivalent to 5 : 6?  10 : 12 2 : 3 15 : 18 35 : 42 |
| 11. | Complete the statement below to form two equivalent ratios.  4 : 9 = 12 : |
| 12. | Which ratio is not equivalent to 5 : 4? |
| 13. | Write the ratio 32 : 48 in it’s simplest equivalent form. |
| 14. | The ratio 900g : 1.2 kg in simplest form, without using units, is;  900 : 1200 9 : 12 3 : 4 6 : 8 |
| 15. | Write the ratio below in simplest form, without using units.  35 minutes : 1 ¾ hours = |
| 16. | The ratio  :  in simplest form, using only whole numbers, is;  8 : 9 2 : 3 3 : 4 1 : 2 |
| 17. | Write the ratio below in simplest form, using only whole numbers.  :  = |
| 18. | In a car park, the ratio of sedans to other vehicles is 15 : 2. If there are 16 other vehicles in the car park, how many sedans are there?  sedans |
| 19. | A fruit juice concentrate suggests it be mixed with water in the ratio  Concentrate : Water = 3 : 17.  How much concentrate should be added to 680 mL of water?  mL. |
| 20. | The ratio of music played on an FM radio station is  Blues : Pop : R&B = 3 : 12 : 5  On a particular day, 144 Pop tracks were played. How many Blues and R&B would you expect on that day?  Blues tracks R&B tracks |
| 21. | When $80 is divided in the ratio 3 : 2, the larger amount is :    $48 $32 $40 $60 |
| 22. | Divide $450 between Jason and Ken in the ratio 5 : 4.  Jason : Ken  $  $ |
| 23. | Suri and Lashay divide the profit from their business between them in the ratio 7 : 5 respectively  .  If the profit in one week was $1 872.00, then the amount that Suri would receive is:  $156 $1092 $780 $1365 |
| 24. | To make *Pot Rite* potting mix, a landscaping company mixes compost, sand and peat in the ratio 8 : 4 : 1 by mass. How much sand would be needed to make 52 tonnes if *Pot Rite* mix?  tonnes of sand. |
| 25. | Heather rides her bike for fitness training. On Sunday she rode a distance of 48 km in 3 hours. What was her average speed in km/h?  km/h. |
| 26. | Water Taxi Sydney.jpgA water taxi travels 288 km during an eight hour shift. It’s average speed over that shift is;  12 km/h 24 km/h 36 km/h 48km/h |
| 27. | A car travels at an average speed of 82 km/h for a journey between two towns which are 492 km apart. How long did the trip between the towns take?  hours. |
| 28. | A aeroplane travels at an average speed of 250 m/s when at full speed. How many kilometres would it travel in a minute?  4 km 18 km 12.5 km 15 km. |
| 29. | To mix a herbicide, the instructions say to place the contents of a 500g packet into 4 litres of water. What is this as a rate in g/L?  250 g/L 125 g/L 500g/L 2kg/L |
| 30. | A harvester can cut 36 hectares of cane in an eight hour shift. What is this as a rate in hectares per hour?  hectares/ hour. |
| 31. | A town is growing at a steady rate of 12 residents/month. By how many residents will it’s population increase in a year?  residents. |
| 32. | Water is dripping from a tap at a rate of 8 mL/min. About how much water will drip from the tap in 5 hours?  500 mL 2.4 L 3 litres 6 litres |
| 33. | So far this season Bella has scored at a rate of 15.5 goals/game for her netball team. If she has scored 124 goals so far, how many games has she played?  games. |
| 34. | A recipe for a dessert which serves 4 people calls for 1 cup of sugar. At this rate, how many cups of sugar would be needed if the recipe were made to serve 10 people?  1 ½ cups 2 cups 2 ½ cups 5 cups |
| 35. | Hannah types 24 pages of notes in 4 hours. At this rate, how many similar pages could she type in 9 hours?  pages. |