

Year 7&8 Mathswell – Multi-choice Questions 2019

1. 2019 is divisible by

- A) 13 B) 11 C) 3 D) 7 E) 9

2. If Tua leaves Palmerston North at 11.24am and drives to Wellington arriving at 1.17pm. How long was his journey?

- A) 2hr 53 min B) 1hr 53 min C) 1hr 41 min D) 2hr 41 min E) 2hr 07 min

3. If a rectangular picture frame has a perimeter of 320cm. What is the maximum area it could have?

- A) 320 cm² B) 3200 cm² C) 3600 cm² D) 6400 cm² E) 4800 cm²

4. Sam buys three pizzas for his mates. They eat $\frac{2}{3}$ of one pizza, a half of another and $\frac{3}{4}$ of the last pizza. All together how much pizza is left?

- A) $1\frac{1}{3}$ pizzas B) $1\frac{1}{12}$ pizzas C) 1 pizza D) $\frac{3}{4}$ pizzas E) $\frac{7}{12}$ pizzas

5. Buyflys is a new loyalty card which offers 4 “reward points” for every \$30 spent. If an item worth \$550 is purchased by Jake, how many reward points would he receive?

- A) 21 B) 52 C) 72 D) 104 E) 129

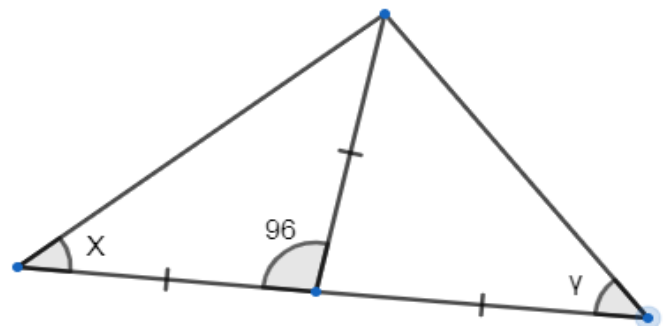
6. On a map, the distance between Wellington and Turangi is 20cm. The actual distance between these two places is 320km. What is the scale of the map?

- A) 1:1800000 B) 1:6250000 C) 1:2000000 D) 1:6400000 E) 1:1600000

7. Which of these numbers is not a square number?

- A) 44944 B) 53824 C) 63504 D) 82364 E) 97344

8. What is the product of x and y in the triangle?



- A) 2016 B) 90 C) 8064 D) 180 E) 2021

9. A street contains 100 houses, they are numbered from 1 to 100. How many times does the digit 9 occur in these numbers?

- A) 10 B) 11 C) 19 D) 20 E) 22

10. When $x = 3$, the value of $3x^2 - 3$ is:

- A) 9 B) 24 C) 36 D) 15 E) 78

11. The eleventh prime number is:

- A) 29 B) 31 C) 37 D) 41 E) 43

12. In a race, Susan starts 1km ahead of Jobi and runs straight at 8km/h. Jobi starts at the same time and follows Jobi at 12km/h. How many minutes will it take for Jobi to catch Susan?

- A) 2 B) 4 C) 10 D) 15 E) 20

13. Smaller tyres were fitted onto a car, decreasing the circumference of the wheels from 160cm to 125cm. On a trip of 200km, the number of revolutions of each wheel was increased by:

- A) 3500 B) 5000 C) 7 000 D) 25 000 E) 35 000

14. The sum of all but one of the internal angles of a quadrilateral is 345° . The size of the remaining interior angle is:

- A) 55° B) 45° C) 35° D) 25° E) 15°

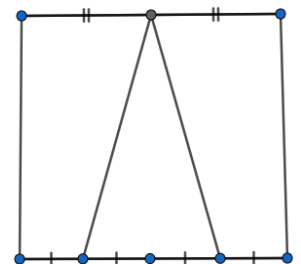
15. The average (mean) of 7 numbers is 6. Five of the numbers are 1, 2, 3, 4, 5, 6. What is the 7th number?

- A) 7 B) 14 C) 21 D) 28 E) 35

16. What does 1 google mean? A 1 followed by:

- A) 100 zeros B) 1000 zeros C) 10000 zeros D) 100000 zeros E) lakh zeros

17. A triangle has been placed in a square as shown. What fraction of the area of the square isn't covered by the triangle?



- A) $\frac{1}{2}$ B) $\frac{3}{7}$ C) $\frac{3}{4}$ D) $\frac{3}{8}$ E) $\frac{1}{4}$

18. Mia's children each require a minimum of 8000 square metres of land to build their own castle. If Mia's section measures 278m by 160m, what is the maximum number of castles her section can fit?

- A) 2 B) 8 C) 6 D) 5 E) 3

19. Freddo, the frog, fell into a well that was 14 metres deep. To get out he leaps 5 metres up and then slides 2 metres. How many leaps will he make to reach the top?

- A) 2 B) 3 C) 4 D) 5 E) 7

20. A house of cards (as shown) is made with 3 decks of 52 cards. If as many cards as possible are used. How many levels would be made?

- A) 11 B) 10 C) 9 D) 8 E) 7



21. Aaron can do a painting in 30 minutes and Baron can do a painting in 20 minutes. If both of them work together to do $\frac{3}{4}$ of a painting, then Baron finishes the rest, how long did take them to complete the painting?

- A) 14 min B) 15 min C) 16.5 min D) 18 min E) 20 min

22. If the time is currently 12:50pm. How much is the angle between the two hands on an analogue clock after one and a half hours has past?.

- A) 50° B) 45° C) 55° D) 66° E) 60°

23. If Tahi has \$10 keeps 10% and give the rest to Rua. She keeps 10% and gives the rest to Toru. He keeps 10% and gives the rest to Wha. How much does Wha get?

- A) \$7.25 B) \$7 C) \$8.10 D) \$8 E) \$7.29

24. A full jar containing 80 mint candies weighs 1320 g. If the jar weighs 800 g when half full, then the weight of the jar when empty is how many grams?

- A) 300 B) 280 C) 260 D) 240 E) 220

25. The BMI (Body Mass Index) is found by dividing your mass in kilograms by the square of your height in metres. If Shrek has a mass of 312 kg and height of 200 cm, his BMI is closest to?

- A) 72 B) 74 C) 76 D) 78 E) 80



26. A plane travels 3469km at a speed of 815km/h. Which of the following is closest to the time the flight took?

- A) 4hrs 5min B) 4hrs 10min C) 4hrs 15min D) 4hrs 20min E) 4hrs 25min

27. An Orphanage has enough food to feed 11 orphans for 6 days. How many days would this amount of food feed 33 orphans for, if they still received the same amount of food each day?

- A) 2 B) 3 C) 11 D) 12 E) 18

28. How many minutes will it take to bike 4.5km if you bike at a constant pace of 12km/h?

- A) 16.5 B) 22.5 C) 54 D) 20 E) 27

29. If Kawa buys a painting for \$100 before the GST is added. How much will he have to pay for it?

- A) \$100 B) \$110 C) \$112.5 D) \$115 E) \$125

30. What is the next number in the following set of numbers? 17, 102, 612, 3672, ...

- A) 20132 B) 24480 C) 14688 D) 22032 E) 31073