

2021 BCCTM Math Competition: Grade 5 Solutions

Which of the following regular polygons has the same number of diagonals as it does sides?

- ☐ octagon
- ☐ hexagon
- ☐ quadrilateral
- ☐ pentagon
- ☐ None of these

Answer: pentagon

Brianna was selling raffle tickets for her soccer team. On Wednesday, she sold 60 tickets. On Thursday she sold 96 tickets and noticed that each day's total ticket sales was the sum of the previous two days. How many tickets did Brianna sell on Monday?

- ☐ 20
- ☐ 24
- ☐ 36
- ☐ 48
- ☐ None of these

Answer: 24

How many numbers between 1 and 99 are equal to 4 times an integer?

- ☐ 23
- ☐ 24
- ☐ 25
- ☐ 96
- ☐ None of these

Answer: 24

Raul bought a toy car that originally cost \$40.00 but was on sale for 15% off. If he had to pay 8% sales tax, how much did Raul pay for the toy car?

- ☐ \$36.00
- ☐ \$36.72
- ☐ \$38.84
- ☐ \$42.80

Answer: \$36.72

Which is true?

- ☐ $1/7 > 1/3$
- ☐ $2/9 < 1/5$
- ☐ $2/3 > 7/10$
- ☐ $5/7 < 8/9$
- ☐ None of these

Answer: $5/7 < 8/9$

If my salary doubles each day for seven days, how much money will I have earned if I received two dollars the first day?

- ☐ \$252
- ☐ \$254
- ☐ \$256
- ☐ \$258
- ☐ None of these

Answer: \$254

Sandra picks a one digit number and does the following: First she squares it, then she subtracts ten, and then she doubles the result and obtains the number 30. What number did Sandra start with?

- ☐ 6
- ☐ 7
- ☐ 8
- ☐ 9
- ☐ None of these

Answer: None of these

Cindy has a paper rectangle that is 12 inches wide and 8 inches long. She folds the paper twice, first vertically and then horizontally. In square inches, what is the area of one of the rectangles?

- ☐ 24
- ☐ 36
- ☐ 48
- ☐ 96
- ☐ None of these

Answer: 24

Sasha has a blue bear, a red bear, a brown bear, and a purple bear on her shelf. How many different ways can she arrange the bears?

- ☐ 4
- ☐ 10
- ☐ 16
- ☐ 24
- ☐ None of these

Answer: 24

Which of the following numbers has exactly three positive factors?

- ☐ 3
- ☐ 6
- ☐ 7
- ☐ 8
- ☐ None of these

Answer: None of these

How many different 3-digit whole numbers have all of the numbers 1, 2, and 3 as their digits?

- ☐ 3
- ☐ 6
- ☐ 9
- ☐ 12
- ☐ None of these

Answer: 6

In a class with 12 boys and 15 girls, $\frac{3}{4}$ of the boys have cell phones and $\frac{3}{5}$ of the girls have cell phones. How many of the students in the class have cell phones?

- ☐ 12
- ☐ 14
- ☐ 16
- ☐ 18
- ☐ None of these

Answer: 18

What number comes next in this sequence of numbers: 2, 5, 11, 23, ...?

- ☐ 26
- ☐ 31
- ☐ 37
- ☐ 46
- ☐ None of these

Answer: None of these

Twice the dog's weight is the same as three times the cat's weight. If the dog's weight is 18 pounds more than the cat's weight, what is the sum of their weights?

- ☐ 36
- ☐ 54
- ☐ 90
- ☐ 108
- ☐ None of these

Answer: 90

A circle is inscribed in a square. If the diameter of the circle is 10 cm, what is the area of the square in sq. cm?

- ☐ 25
- ☐ 40
- ☐ 100
- ☐ 400
- ☐ None of these

Answer: 100

Which of these numbers is the smallest?

- ☐ **$\frac{3}{5}$**
- ☐ **0.66**
- ☐ **$\frac{13}{20}$**
- ☐ **$\frac{2}{3}$**
- ☐ **None of these**

Answer: $\frac{3}{5}$

Ali is reading a book. He notices that the sum of the two pages in front of him is 73. What is the product of the two page numbers?

- ☐ **1232**
- ☐ **1233**
- ☐ **1332**
- ☐ **1333**
- ☐ **None of these**

Answer: 1332

Mickey's dad sleeps one quarter of the day. Mickey sleeps one and half times as long as his dad. What fraction of the day does Mickey spend sleeping?

- ☐ **$\frac{1}{6}$**
- ☐ **$\frac{1}{2}$**
- ☐ **$\frac{1}{8}$**
- ☐ **$\frac{3}{8}$**
- ☐ **None of these**

Answer: $\frac{3}{8}$

I am making pancakes for breakfast. The recipe to feed 6 people calls for 4 eggs. How many eggs will I need to make enough pancakes to feed 15 people?

- ☐ 6
- ☐ 8
- ☐ 10
- ☐ 12
- ☐ None of these

Answer: 10

Pablo has an equal number of pennies and nickels. Which of the following is an amount of change that Pablo could have?

- ☐ 24 cents
- ☐ 34 cents
- ☐ 37 cents
- ☐ 40 cents
- ☐ None of these

Answer: 24 cents

The sum of two numbers is 56. The first number is equal to one half of one fourth of the difference of the two numbers. Which of the pairs below could be a solution to this problem?

- ☐ (6, 50)
- ☐ (5.6, 50.4)
- ☐ (5.8, 50.2)
- ☐ (6.2, 49.8)
- ☐ None of these

Answer: (5.6, 50.4)

What is the product of the first three positive prime numbers?

- ☐ 6
- ☐ 30
- ☐ 210
- ☐ 300
- ☐ None of these

Answer: 30

If 3 rips = 4 raps, and 2 raps = 3 reps, then 1 rep equals what?

- ☐ 1/6 rip
- ☐ 1/2 rip
- ☐ 2 rips
- ☐ 6 rips
- ☐ None of these

Answer: $\frac{1}{2}$ rip

A rectangle is formed by joining two identical squares. If the perimeter of the rectangle is 30 inches, what is the area of the one of the squares?

- ☐ 25 sq. in.
- ☐ 30 sq. in
- ☐ 40 sq. in
- ☐ 50 sq. in
- ☐ None of these

Answer: 25 sq. in

Each of five friends sang a song with each of the others. How many songs were sung?

- ☐ 5
- ☐ 10
- ☐ 15
- ☐ 20
- ☐ None of these

Answer: 10

I went to the movies with my friend on June 1st. The last time I went to the movies was 60 days earlier. What was the month and day of the last time I went to the movies?

- ☐ March 31
- ☐ April 1
- ☐ April 2
- ☐ April 3
- ☐ None of these

Answer: April 2

Saul, Tara, and Uri ate some jelly beans. Saul ate $\frac{1}{3}$ as many jelly beans as Tara. Tara ate 4 times as many jelly beans as Uri. If Uri ate 27 jelly beans, how many did Saul and Tara eat?

- ☐ 36
- ☐ 108
- ☐ 118
- ☐ 144
- ☐ None of these

Answer: 144

If today is Tuesday, what day of the week will it be 96 days from today?

- ☐ Saturday
- ☐ Sunday
- ☐ Monday
- ☐ Tuesday
- ☐ None of these

Answer: Sunday

If 31 minutes ago was noon, what time will it be 31 minutes from now?

- ☐ 12:31 AM
- ☐ 12:31 PM
- ☐ 1:02 AM
- ☐ 1:02 PM
- ☐ None of these

Answer: 1:02 PM

Miranda built a square array using 144 color tiles. How many tiles form the border of the array?

- ☐ 40
- ☐ 44
- ☐ 48
- ☐ 54
- ☐ None of these

Answer: 44