Name:
School:  Grade: Form:A
Round 2: Multiple Choice Test
Rules:
1. You will have 60 minutes to complete the exam.
2. The exam consists of 30 problems each with four choices.
3. Each correct answer is worth 6 points and there is NO penalty for
guessing so you should answer every problem!
<ul><li>4. No calculators, phones, smartwatches, or any other aids are allowed during the test.</li><li>5. If you finish before time is called, review your answers. When time is called, stop and put your pencil down. You may not answer any more questions after this point.</li><li>6. Figures are not necessarily drawn to scale.</li></ul>
7. Be sure to transfer your answers to your scantron. We will collect the scantron but you are free to keep this multiple choice test.
8. Do all of your work on your test, but if you need additional scratch paper or a pencil during the test, please raise your hand.
9. At this time, please be sure your name, grade, and school is on this test as well as on your <b>scantron sheet.</b>
Name:(First and Last Name)
Subject: (Your School Name)
Period: (Your Grade: either 4 or 5)
Date : Form A (Be sure your scantron form Letter matches the top of your test!)

2024 Mini Mathlete Competition Form A

## MC Problems:

- 1) If the perimeter of a square is 72cm, what is the length of each side?
  - A) 18 cm
- B) 9 cm
- C) 36cm
- D) 288 cm

- 2) Write 76% as a fraction in simplest form.
  - A)  $\frac{38}{5}$

- B)  $\frac{3}{7}$  C)  $\frac{19}{25}$
- D)  $\frac{6}{25}$

- 3) How many pints are in 6 gallons?
  - A) 12

- B) 24
- C) 48
- D) 96

- - A) 0

- B) 0.2520
- C) 1
- D) 2520

- 5)  $\sqrt{9} + \sqrt{81} = \sqrt{9 + 81 + ?}$ 
  - A) 0 B) 54

- C) 90
- D) 144

6) Simplify: 
$$1 + \frac{3}{1 + \frac{1}{1 + 2}}$$

- A) 4
- B)  $\frac{16}{7}$

- C)  $\frac{19}{7}$
- D)  $\frac{3}{7}$

- 7) Find the number of seconds in 3.5 hours.
- A) 210
- B) 3600
- C) 10,800
- D) 12,600

- 8) What is the missing value, N, in the equation  $2\frac{1}{4} + \frac{3}{N} = 2\frac{5}{8}$ ?
  - A) 6

- B) 7
- C) 8
- D) 10

- 9) The greatest common factor of 48 and 72 is
  - A) 4
- B) 8
- C) 12
- D) 24

- 10) What are the odds of getting one head and two tails (in any order) after three coin flips?
  - A) $\frac{1}{2}$
- B)  $\frac{3}{8}$

C)  $\frac{1}{3}$ 

D)  $\frac{1}{4}$ 

- 11) For the following equation  $3x 6 = \frac{16}{3x 6}$  solve for x.
- A)  $\frac{15}{7}$  B)  $\frac{3}{10}$

- C)  $\frac{10}{3}$
- D)  $\frac{11}{5}$

- 12) A team won 40 of its first 50 games. How many of the remaining 40 games must this team win so it will have won exactly 70% of its games for the season?
- A) 20
- B) 23
- C) 28

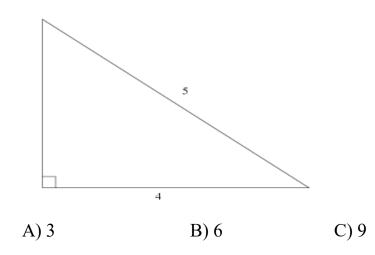
D) 30

- 13) Evaluate f(-2) g(7), given that  $f(x) = 8x^2 32$  and g(x) = 5 3x
  - A) -48
- B) 16
- C) 20
- D) -18

14) The graph of the equation  $y = \frac{7}{3}x - 4$  passes through which quadrants?

- I. Quadrant 1
- II. Quadrant 2
- III. Quadrant 3
- IV. Quadrant 4
- A) I B) I, II, III C) I, III, IV D) All of the Quadrants

15) What is the area of this right triangle?



- 16) If Roberto has \$0.37 composed of quarters, dimes, nickels, and pennies, what is the least number of pennies that he could have? (Note that he doesn't necessarily have any quarters, dimes or nickels)
  - A) 2
- B) 7
- C) 12
- D) 37

D) 20

17) Lauren wants to boost her grade from an 88 to a 90 in biology. Currently, her test scores are 80, 95, 79, and 98. What must Lauren earn on the last test to raise her grade to a 90?				
A) 88	B) 92	C) 95	D)98	
<i>'</i>	xes up at 4:36 am eve what time does he wa	ery morning but today wake up today?	vakes up exactly 75	
A) 5:36	B) 5:41	C) 5:51	D) 4:11	
19) A product of 3	3 consecutive positiv	e integers		
A) Is always divis	sible by 2 but may no	ot be divisible by 3		
B) Is always divis	sible by 3 but may no	ot be divisible by 2		
C) Is always divis	sible by 6 but may no	ot be divisible by 12		
D) Is always divis	sible by 12			
		y 4:00. What was the marrand minute hands?	neasure (in degrees)	
A) 90 degrees	B) 100 degree	ees C) 120 degrees	D) 150 degrees	

- 21) What is the product of the mean and median of the first 4 prime numbers?
  - A) 6.875
- B) 8.25

- C) 16
- D) 17

- 22) What number is in the ones digit in 3<sup>26</sup>?
  - A) 3
- B) 7
- C) 8

D) 9

- Solve  $x = \sqrt{6 + \sqrt{6 + \sqrt{6 + \dots}}}$ 23)

- A) 3 B) 2 C)  $\sqrt{6}$
- D) -6

24) Which equation is perpendicular to the line represented by 3x - 5y = 30 and passes through the point (4, 3)?

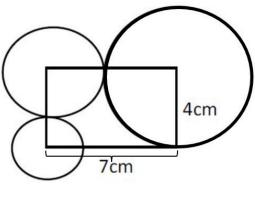
A) 
$$3x + 5y = 29$$
 B)  $3x - 5y = -3$ 

B) 
$$3x - 5y = -3$$

C) 
$$5x + 4y = 29$$

C) 
$$5x + 4y = 29$$
 D)  $5x + 3y = 29$ 

25) Find the sums of the circumference of the three circles below:  $(C = 2\pi r)$ 



- A)  $14\pi$
- B) 16π
- C)  $18\pi$
- D)  $20\pi$

- 26) Robbie and Bobby are best friends. Robbie is 25 years less than double of Bobby's age. In 7 years, Robbie will be 5 years more than Bobby's current age. What are their ages?
  - A) 15, 27
- B) 9, 12
- C) 21, 23
- D) 20, 15

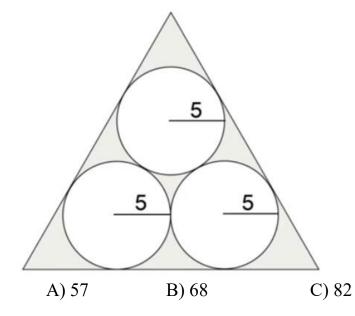
- 27) In planet Swæy-Zi, 5 yorkpops equals 2 quizzikals. 4 quizzikals equals 8 hurtlaks and 3 hurtlaks equals 17 Earth dollars. How many earth dollars is 6 yorkpops?
- A) \$23.45
- B) \$17.25
- C) \$15.50

D) \$27.20

- 28) If  $3^x = 11$  and  $11^y = 27$  then what is xy?
- A) 2
- B) 3
- C) 4
- D) 5

- 29) On a number line, two different integers are each the same distance from my favorite integer and have a sum of 144. What is my favorite integer?
  - A) 31
- B) 36
- C) 48
- D) 72

30) Find the perimeter of the triangle approximated to the nearest whole number.



D) 91

2024 Mini Mathlete Competition Form A

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$$\frac{3x4x5x6x7}{7x6x5x4x3} =$$

a. 0

b. 0.2520

c. 1

d. 2520

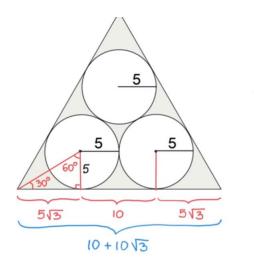
Find the number of seconds in 3.5 hours.

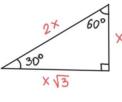
a. 210

b. 3600

c. 10,800

d. 2100





Perimeter 
$$3(10+10\sqrt{3})$$
 =  $30+30\sqrt{3}$   $\approx 81.96$ 

$$\sqrt{80-31}-\sqrt{85-21}=?$$

- A) 1
- B) -1
- C) 5
- D) -5

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On a number line, two different integers are each the same distance from my favorite integer and have a sum of 144. What is my favorite integer?

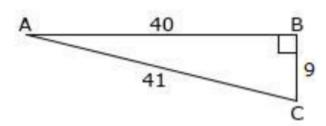
- A) 31
- B) 36
- C) 48
- D) 72



4) Find the Area of the Triangle below

A) 49

- B) 90
- C) 180
- D) 360



https://drive.google.com/drive/folders/0B8Cdqyi1uD4YbmJJMTRreWtXaEE?resourcekey=0-94Vl9AJ1p54Z2p0S\_MXPrw

