

# 2010 Orange County Math Circle All-Girls Tournament

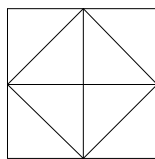
## Grade 3 - 4 Sprint Round

Name:

School:

Grade:

- $2 + 4 + 6 = 12 + 14 + 16 - (?)$   
(A) 10    (B) 20    (C) 30    (D) 40
- $1 + 1 + 1 + 1 + 1 + 1 =$   
(A)  $1 \times 2$     (B)  $2 \times 2$     (C)  $3 \times 2$     (D)  $4 \times 2$
- $3 + 4 + 5 + 6 + 7 =$   
(A) 23    (B) 25    (C) 27    (D) 29
- Which of the following is a common factor of 35 and 42?  
(A) 4    (B) 5    (C) 6    (D) 7
- How many eighths are there in  $2\frac{1}{2}$ ?  
(A) 5    (B) 10    (C) 15    (D) 20
- What is 50 more than the sum of 725 and 215?  
(A) 990    (B) 940    (C) 590    (D) 290
- If today is Sunday, then 2 days before yesterday was  
(A) Thursday    (B) Friday    (C) Saturday    (D) Sunday
- Alice has 1 dozen pairs of socks. How many socks does Alice have?  
(A) 6    (B) 12    (C) 24    (D) 144
- How many squares are in the following figure.



- (A) 4    (B) 5    (C) 6    (D) 7
- $88 + 88 + 88 = 22 \times (?)$   
(A) 6    (B) 8    (C) 10    (D) 12
  - How many minutes are there in  $6\frac{3}{4}$  hours?  
(A) 305    (B) 405    (C) 310    (D) 410
  - Alexa skated 1 km on Monday. Each day, she skates twice as far as the day before. When will she first skate more than 20 km in a day?  
(A) Saturday    (B) Sunday    (C) Monday    (D) Friday
  - Which of the following number is divisible by 11 and 111?  
(A) 111    (B) 1, 111    (C) 11, 111    (D) 111, 111

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14.  $63.75 = 60 + 3 + \frac{7}{10} + (?)$ .  
(A)  $\frac{1}{200}$     (B)  $\frac{1}{20}$     (C) 5    (D) 0.5
15. 12 thousands plus 24 hundreds plus 5 tens plus 19 ones equal to  
(A) 16,245    (B) 14,469    (C) 13,219    (D) 12,219
16. Michelle started her math homework at 11:25 AM and finished at 1:05 PM. How long did she take?  
(A) 1 hr 40 mins    (B) 1 hr 42 mins    (C) 2 hr 20 mins    (D) 2 hr 40 mins
17. 15 people lined up to purchase movie tickets. If there are 5 people in front of Wendy, how many people are behind her?  
(A) 4    (B) 5    (C) 9    (D) 10
18. What is the missing number in this pattern?  
  
43209, 43009, ?, 42609, 42409  
  
(A) 42,409    (B) 42,809    (C) 43,109    (D) 53,009
19. The width of a rectangle is 6 cm. If the length is twice the width, find the area of the rectangle.  
(A)  $12 \text{ cm}^2$     (B)  $36 \text{ cm}^2$     (C)  $60 \text{ cm}^2$     (D)  $72 \text{ cm}^2$
20. A bus left Irvine with some passengers on it. At Laguna Niguel,  $\frac{1}{8}$  of the passengers got off and 7 new passengers boarded it. There were now 63 passengers on board the bus. How many passengers were on the bus when it left the Irvine station?  
(A) 49    (B) 56    (C) 64    (D) 72
21. The product of all even whole numbers less than 10 is  
(A) 0    (B) 364    (C) 384    (D) 3,840
22. Halfway up a hill, 4 girls stopped to pick berries. Payton picked 76 blackberries, Sophie picked 54 raspberries, Isabella picked 32 strawberries, and Nicole picked 1 gigantic blueberry. How many berries did the girls pick altogether?  
(A) 153    (B) 159    (C) 161    (D) 163
23. Mia has a chicken farm in her backyard. If her chicken lays 5 eggs each week, how many weeks would it take her to collect 15 dozen eggs?  
(A) 18    (B) 36    (C) 60    (D) 180
24. If the length of each side of a rectangle is an odd number, then the perimeter of the rectangle could be  
(A) 15    (B) 17    (C) 19    (D) 20

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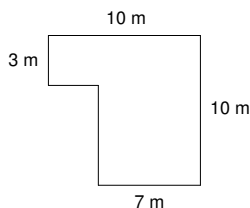
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25. Find the area of the figure below.



- (A)  $70 \text{ m}^2$     (B)  $79 \text{ m}^2$     (C)  $80 \text{ m}^2$     (D)  $89 \text{ m}^2$
26. Taylor arrived at the math tournament 35 minutes before 1:22 PM. Aley arrived at the tournament 18 minutes after Taylor arrived. When did Aley arrive?  
(A) 12 : 29    (B) 12 : 47    (C) 1 : 05    (D) 1 : 40
27. Nikita and Hanna each pick a whole number between 1 and 2000. If the difference between their number is 10, which of the following may be the sum of their numbers?  
(A) 2005    (B) 2010    (C) 2015    (D) It cannot be determined
28. Eva can eat 16 blueberries every 3 minutes. Esha can eat 9 blueberries every 2 minutes. In 6 minutes, how many more blueberries can Eva eat than Esha?  
(A) 5    (B) 14    (C) 21    (D) 30
29. A bag contains 2 red, 2 blue, and 2 green stickers. Emily takes one sticker at a time from this bag without looking. What is the least number of stickers Emily must take from this bag to be sure that she has taken 2 stickers of the same color?  
(A) 2    (B) 3    (C) 4    (D) 6
30. Chelsea paints twice as fast as Rachele. If it took Rachele 6 hours to paint a room, how long would it have taken if both had painted the room together?  
(A) 2 hours    (B) 3 hours    (C) 9 hours    (D) 18 hours