

CIE-USA/DFW

MathComp 2010

Grade 4

30 questions

Time: One Hour

Note:

- Make sure to write all your answers on the answer sheet. Only the answer sheet will be graded.
- Each question only has one correct answer.
- Print your name clearly and legibly below.

Name _____

Room _____

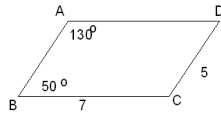
1. What is the value of $9112 - 2119$?

- A. 7003 B. 7013 C. 7023 D. 6993 E. 6994

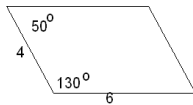
2. 137 minutes after 10:30 am is how many minutes before 1:00 pm?

- A. 11 B. 12 C. 13 D. 14 E. 15

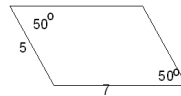
3. Which parallelogram is congruent to parallelogram ABCD?



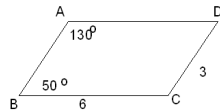
A.



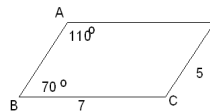
B.



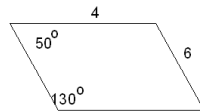
C.



D.



E.



4. Today the sum of the ages of Alice, Bob, and their three kids is 75. What will be the sum of the ages after three years?

- A. 78 B. 81 C. 84 D. 90 E. 87

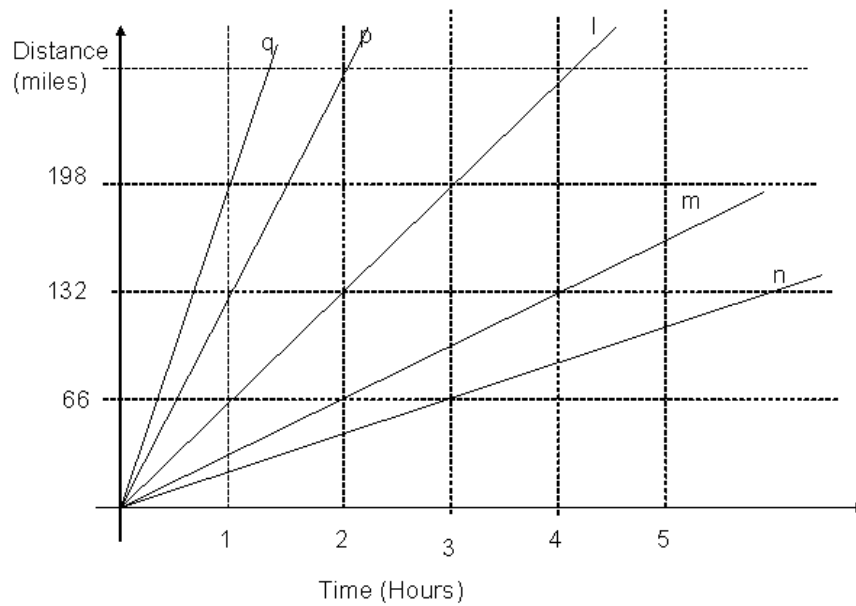
5. Ann ate one cookie, then Bob ate two cookies, then Ann ate three, Bob 4, Ann 5, etc. At the end of the day Ann ate 99, then Bob ate 100 and there were no cookies left. What is the difference of the total number of cookies eaten by Bob and Ann?

- A. 2600 B. 99 C. 2650 D. 50 E. 120

6. How many letters of the word **PROJECTIVE** do not have any lines of symmetry?

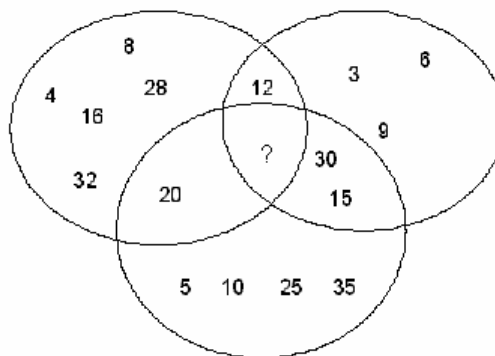
- A) 1 B. 2 C. 3 D. 4 E. 5

7. In the distance formula $d = rt$, r represents the rate of change, or slope. Which ray on the graph best represents a slope of 66 mph?



- A. l B. m C. n D. p E. q

8. This Venn diagram is used to classify counting numbers according to a set of rules. Which one of the following numbers belongs in the region of the diagram made by the question mark?



- A. 45 B. 50 C. 60 D. 65 E. 70

9. How many three-digit numbers are divisible simultaneously by 6, 8, and 10?

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

10 The sum of $k > 1$ consecutive positive integer numbers is 14. What is k ?

- A. 3 B. 4 C. 5 D. 2 E. 6

11. What percent of the large 5x5 square is shaded? (See diagram at bottom of page)

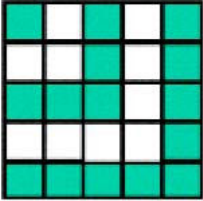
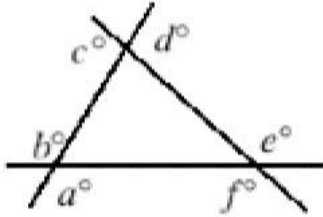
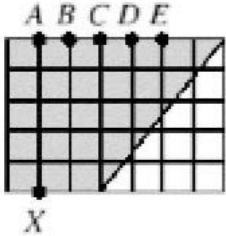
- A. 40% B. 50% C. 55% D. 60% E. 70%

12. What is the value of $a + b + c + d + e + f$? (See diagram at bottom of page)

- A. 360 B. 540 C. 720 D. 900 E. depends on the triangle

13. Which of the following straight lines cuts the shaded area in half? (See diagram)

- A. XA B. XB C. XC D. XD E. XE

<p>For problem 11:</p>	
<p>For problem 12:</p>	
<p>For problem 13:</p>	

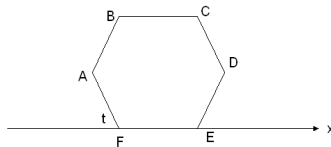
14. The sum of the numbers $a, b,$ and c is 54. In addition, a is twice as large as b ; and b is 6 less than c . What is b ?

- A. 11 B. 12 C. 13 D. 14 E. 10

15. Find the missing number: $\frac{1+2}{3} + \frac{4+5}{6} = \frac{7+8}{9-?}$

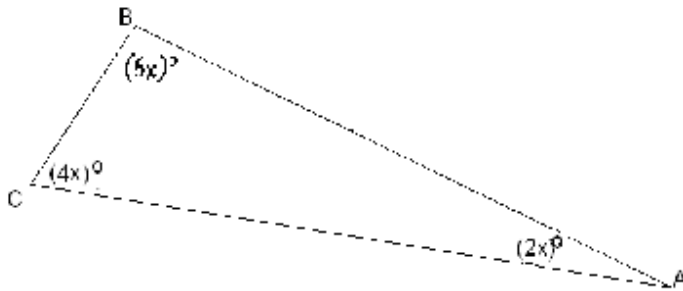
- A. 1 B. 2 C. 3 D. 4 E. 6

16. Figure ABCDEF below is a regular hexagon with line x passing through side FE. What is the measure of $\angle t$?



- A. 30° B. 135° C. 120° D. 60° E. 45°

17.



Choose one of the following closest to $\angle BCA$

- A. 15.5° B. 31° C. 46.5° D. 60° E. 64°

18. Three wolves eat two lambs for one hour and a half. For how many hours will one wolf eat one lamb?

- A. $2\frac{1}{3}$ B. $2\frac{1}{4}$ C. $2\frac{1}{2}$ D. $3\frac{1}{2}$ E. $3\frac{1}{3}$

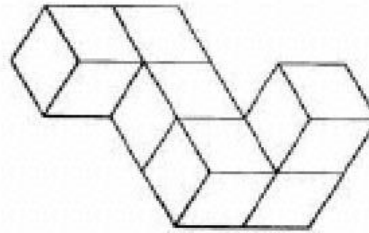
19. Two six-sided dice each have two red, two yellow, and two blue faces. If we roll the dice, what is the probability that both dice show matching colors?

- A. $\frac{1}{36}$ B. $\frac{1}{9}$ C. $\frac{1}{27}$ D. $\frac{1}{3}$ E. $\frac{1}{6}$

20. If $a < b$ and $b = c$, which statement must be true?

- A. The values of a , b , and c are positive.
 B. The value of a is less than the value of c .
 C. The values of a , b , and c are negative.
 D. The value of a is greater than the value of c .
 E. None of above

21. What is the surface area of this solid figure in square inches if the edge of each cube measures 1 inch?



- A. 25 B. 26 C. 27 D. 28 E. 29

22. If you pick a positive factor of 324 at random, what is the probability that it is a perfect square?

- A. $\frac{4}{15}$ B. $\frac{1}{3}$ C. $\frac{1}{5}$ D. $\frac{2}{5}$ E. $\frac{7}{15}$

23. Tina is making toothpick squares. She needs four toothpicks to make one square, seven toothpicks to make a row of two squares, and ten toothpicks to make a row three squares.

4 toothpicks



7 toothpicks



10 toothpicks



How many toothpicks will Tina need to make a row of seven squares?

- A. 22 B. 21 C. 23 D. 20 E. 19

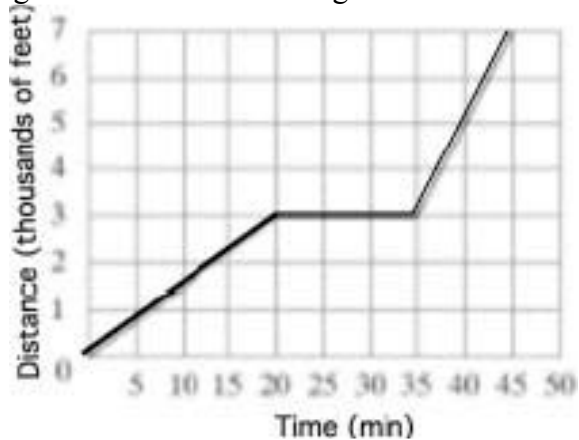
24. The manager of the Sherbet Shoppe wants to construct a circle graph showing the popularity of the various sherbet flavors he offers. Here is the tally of the favorite flavors of his first 30 customers on Saturday. The measure of the angle in the sector for lemon sherbet is closest to

Favorite Sherbet Flavors

Pineapple	I
Lime	
Lemon	I
Raspberry	
Orange	

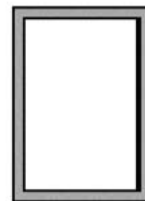
- A. 30° B. 45° C. 60° D. 72° E. 90°

25. Harry is walking along a hiking trail. The graph represents his distance from the start of the trail compared to time. Assume that he made a 15-minute stop during his walk. His average walking rate, in feet/minute, during the time he was walking was closest to



- A. 155 B. 275 C. 315 D. 355 E. 235

26. A 30cm by 40 cm page of a book includes a 2 cm margin on each side. What percent of the page is occupied by the margin?



- A. 14% B. 16% C. 18% D. 20% E. 22%

27. Which one of these five numbers is the smallest?

- A. $\frac{1}{12} \div \frac{1}{18}$ B. $\frac{1}{18} \div \frac{1}{12}$ C. $\frac{1}{18} \times \frac{1}{12}$ D. $\frac{1}{18} - \frac{1}{12}$ E. $\frac{1}{12} - \frac{1}{18}$

28. The integers greater than 1 are arranged in an array with 5 columns as shown. In which column is 2010?

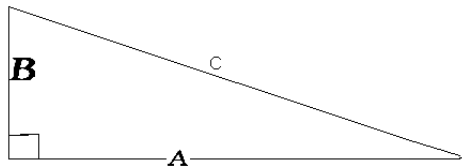
A	B	C	D	E
	2	3	4	5
9	8	7	6	
	10	11	12	13
17	16	15	14	

- A) A B) B C) C D) D E) E

29. One tomato and one walnut cost as much as one apple and one pear. A pear costs as much as an apple and a walnut. A tomato costs as much as a pear and four walnuts. How many walnuts does a tomato cost?

- A. 8 B. 12 C. 9 D. 10 E. 11

30. If hypotenuse C is 26 centimeters and leg B is 10 centimeters, how long is leg A?



- A. 28 cm B. 27 cm C. 25 cm D. 24 cm E. 23 cm