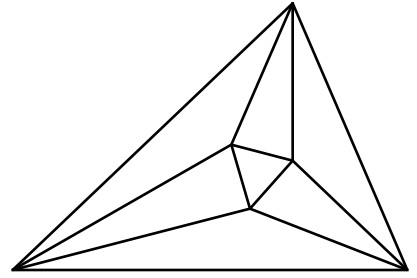


# Meet 2 - Event A 2002-2003

Questions are worth 2-2-2-4-4 points respectively.  
Remember your units.



\_\_\_\_\_ 1. Write in scientific notation:  
0.00623

\_\_\_\_\_ 2.  $|-4| + |7| - |2.4 - 8| = ?$

\_\_\_\_\_ 3. What is the midpoint between -4.3 and 1.5?

\_\_\_\_\_ 4. Nan had four more pieces of candy than Maria did, and Peggy had only half as many pieces as Maria. Let  $P$  represent the number of pieces of candy Peggy had. Express the amount of candy Nan had as a function of  $P$ .

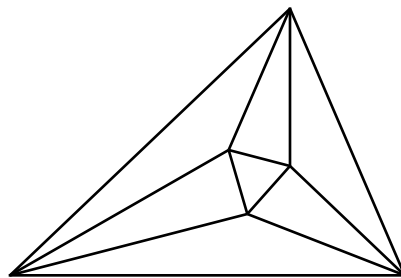
\_\_\_\_\_ 5. Write 98 as a quotient of two factorials.

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# Meet 2 - Event A 2002-2003

## Answers

Questions are worth 2-2-2-4-4 points respectively.  
Remember your units.



$6.23 \times 10^{-3}$  1.

5.4 2.  $4+7-5.6=11-5.6=5.4$

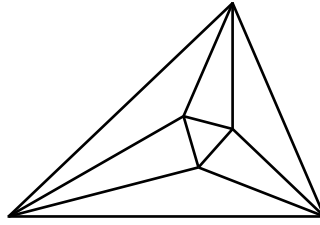
-1.4 3.  $\frac{(-4.3+1.5)}{2} = -1.4$

$2P+4$  4.  $N = M + 4$  and  $P = \frac{1}{2}M$ , so  $2P = M$ .  $N = 2P + 4$

$\frac{98!}{97!}$  5.

# Meet 2 - Event B 2002-2003

Questions are worth 2-2-2-4-4 points respectively.  
Remember your units.



$A =$  \_\_\_\_\_ 1. Find the values of  $A$  and  $B$ :

$$\begin{array}{r} 69 \\ 62 \overline{) 43AB} \\ \underline{37A} \\ 60B \\ \underline{558} \\ 47 \end{array}$$

$B =$  \_\_\_\_\_

\_\_\_\_\_ 2. Write  $2^3 3^{-2} 5^1$  as a fraction without exponents.

\_\_\_\_\_ 3. Which expression is **NOT** equal to the others?

$$-1^2 \cdot 2^3 \cdot 9, \quad (-1)^2 (2)^3 (3)^2, \quad (-3)^2 \cdot 8, \quad 3 \cdot 4 \cdot 6$$

\_\_\_\_\_ 4. Find both values of  $x$  if  $|3x - 2| = 10$ .

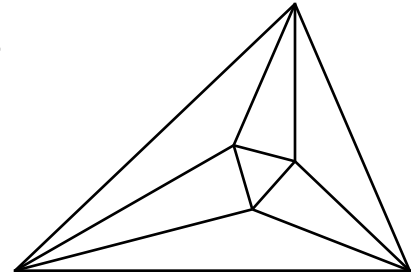
\_\_\_\_\_ 5. On a straight section of Highway 16, Yia lives 0.5 miles from Seng and Vang lives 0.3 miles from Nee. Nee lives 0.1 miles from Seng. What is the closest Yia could live from Vang?

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# Meet 2 - Event B 2002-2003

## Answers

Questions are worth 2-2-2-4-4 points respectively.  
Remember your units.



A = 2 1.  $6 \times 62 = 372$ , so  $A=2$

B = 5  $558 + 47 = 605$ , so  $B=5$

1 pt for each  
answer

$\frac{40}{9}$  2.  $2^3 = 8$ ,  $3^{-2} = \frac{1}{9}$ , so  $\frac{8 \cdot 5}{9} = \frac{40}{9}$

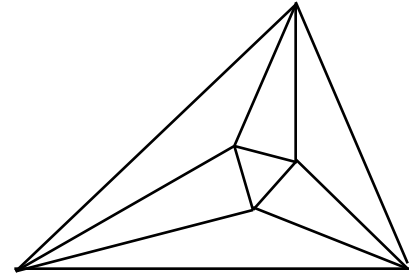
$-1^2 \cdot 2^3 \cdot 9$  3.  $-1^2 \cdot 2^3 \cdot 9 = -72$  and the others all equal 72

$4, -\frac{8}{3}$  4.  $3x - 2 = 10$        $3x - 2 = -10$   
or  $4, -2\frac{2}{3}$        $3x = 12$        $3x = -8$   
or  $4, -2.\bar{6}$        $x = 4$        $x = -\frac{8}{3} = -2\frac{2}{3} = -2.\bar{6}$

0.1 miles 5.  $\begin{array}{ccccccc} Y & V & & N & S \\ + & + & + & + & + \end{array}$

# Meet 2 - Event C 2002-2003

Questions are worth 2-2-2-4-4 points respectively.  
Remember your units.



\_\_\_\_\_ 1. What is the next number in the sequence:  
1, 1, 2, 3, 5, ?

\_\_\_\_\_ 2. What is the value half way between 3.1 and 3.001?

\_\_\_\_\_ 3. What is the midpoint between  $(n+3)$  and  $(3n+7)$ ?

\_\_\_\_\_ 4. Nan had four more pieces of candy than Maria did, and Peggy had only half as many pieces as Maria. Let  $P$  represent the number of pieces of candy Peggy had. Express the amount of candy Nan had as a function of  $P$ .

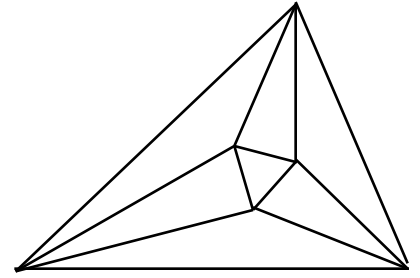
\_\_\_\_\_ 5. Write 210 as an expression using only 7 and 4 as the digits.

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# Meet 2 - Event C 2002-2003

## Answers

Questions are worth 2-2-2-4-4 points respectively.  
Remember your units.



8 1.  $3+5=8$  This is the Fibonacci Sequence.

3.0505 2.  $\frac{3.1 + 3.001}{2} = 3.0505$

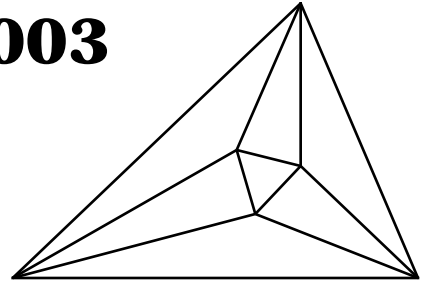
$2n+5$  3.  $\frac{n+3+3n+7}{2} = \frac{4n+10}{2} = 2n+5$

$2P+4$  4.  $N = M+4$  and  $P = \frac{1}{2}M$ , so  $2P = M$ .  $N = 2P+4$

$\frac{7!}{4!}$  5.  $210 = 7 \cdot 6 \cdot 5 = \frac{7!}{4!}$

# Meet 2 - Team Event 2002-2003

Questions are worth 4 points each.  
Remember your units.

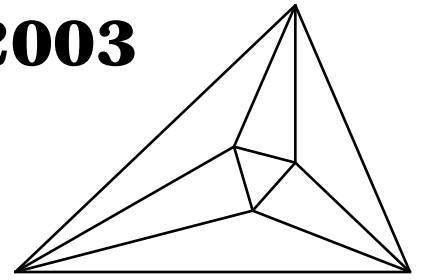


- \_\_\_\_\_ 1. When expanded as a decimal,  $1/67$  has a repetend (the repeating part of the decimal) of 66 digits. What are the last two digits of the repetend?
- \_\_\_\_\_ 2. Write 30 as a quotient of two factorials that is **NOT**  $\frac{30!}{29!}$ .
- \_\_\_\_\_ 3. Find the next number in this sequence:  $2, \frac{5}{2}, \frac{10}{3}, \frac{17}{4}, ?$
- \_\_\_\_\_ 4. Find the values of  $x$  if  $|2x + 3| = 7$ .
- \_\_\_\_\_ 5. Find the point  $\frac{1}{4}$  of the way from  $(1, 2)$  to  $(9, 2)$ .
- \_\_\_\_\_ 6. Solve for  $x$  if  $4^x = 2^8$ .
- \_\_\_\_\_ 7. Write  $6!$  as a product of prime numbers raised to the appropriate power.
- \_\_\_\_\_ 8. Find both numbers that are twice as far from 8 as from 10.
- \_\_\_\_\_ 9. What is the midpoint on a ruler between  $1\frac{7}{8}$  and  $3\frac{5}{8}$ ?
- \_\_\_\_\_ 10. What is the next number in the sequence: 1, 8, 27, 64, ?

School \_\_\_\_\_

# Meet 2 - Team Event

# 2002-2003



## Answers

Questions are worth 4 points each.  
Remember your units.

\_\_\_\_\_ 97 \_\_\_\_\_ 1. 
$$\begin{array}{r} .01KK97 \\ 67 \overline{)1.00KK00} \\ \underline{67} \phantom{00} \\ 330 \phantom{0} \\ \underline{650} \phantom{0} \\ 603 \phantom{0} \\ \underline{470} \phantom{0} \\ 469 \phantom{0} \\ \underline{1} \phantom{0} \end{array}$$

from  $67 \times 9$   
 from  $67 \times 7$

Work backwards from a remainder of 1

\_\_\_\_\_  $\frac{6!}{4!}$  \_\_\_\_\_ 2.  $30 = 6 \cdot 5$

\_\_\_\_\_  $\frac{26}{5}$  \_\_\_\_\_ 3.  $\frac{n^2 + 1}{n}$  is the generator, so  $\frac{5^2 + 1}{5} = \frac{26}{5}$

\_\_\_\_\_ 2, -5 \_\_\_\_\_ 4. 
$$\begin{array}{l} 2x + 3 = 7 \\ 2x = 4 \\ x = 2 \end{array} \qquad \begin{array}{l} 2x + 3 = -7 \\ 2x = -10 \\ x = -5 \end{array}$$

\_\_\_\_\_ (3, 2) \_\_\_\_\_ 5.  $9 - 1 = 8$  spaces for  $x$ ,  $\frac{1}{4} \times 8 = 2$ ,  $1 + 2 = 3$ . No change in  $y$  value.

\_\_\_\_\_ 4 \_\_\_\_\_ 6.  $(2 \cdot 2)(2 \cdot 2)(2 \cdot 2)(2 \cdot 2) = 4^4$

\_\_\_\_\_  $2^4 3^2 5$  \_\_\_\_\_ 7.  $6 \cdot 5 \cdot 4 \cdot 3 \cdot 2 = 3 \cdot 2 \cdot 5 \cdot 2 \cdot 2 \cdot 3 \cdot 2 = 2^4 3^2 5$

\_\_\_\_\_  $12, 9\frac{1}{3}$  \_\_\_\_\_ 8. 
$$\begin{array}{ccccccc} \bullet & | & \bullet & | & \bullet & | & \bullet \\ 8 & 9 & 10 & 11 & 12 & & \\ & & \uparrow & & & & \\ & & 9\frac{1}{3} & & & & \end{array} \quad \frac{2}{3}(2) = \frac{4}{3}, \quad 8 + \frac{4}{3} = 9\frac{1}{3}$$

(2 pts each)

\_\_\_\_\_  $2\frac{3}{4}$  \_\_\_\_\_ 9. 
$$\frac{\left(\frac{15}{8} + \frac{29}{8}\right)}{2} = \frac{\left(\frac{44}{8}\right)}{2} = \frac{22}{8} = \frac{11}{4} = 2\frac{3}{4}$$

\_\_\_\_\_ 125 \_\_\_\_\_ 10.  $1^3 = 1, 2^3 = 8, 3^3 = 27, 4^3 = 64, 5^3 = 125$