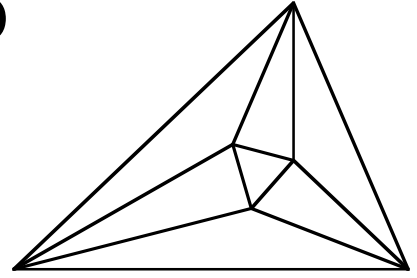


# Meet 2 - Event A 2009-2010

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

**NO CALCULATORS ALLOWED**



\_\_\_\_\_ 1.  $10 \cdot |-7 + 4| = ?$

\_\_\_\_\_ 2.  $4 \times 10^{-2} + 5.78 \times 10^1 = ?$

\_\_\_\_\_ 3.  $2^0 \cdot 3^2 \cdot 4^1 = ?$

\_\_\_\_\_ 4. If 4 is the midpoint of  $A$  and  $B$ , 10 is the midpoint of  $B$  and  $C$ , and  $B$  is the midpoint of 4 and 10. What is the distance from  $A$  to  $C$ ?

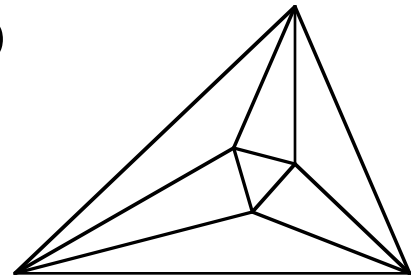
\_\_\_\_\_ 5. What number is next?  
99, 80, 63, 48, \_\_\_\_\_

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# Meet 2 - Event A 2009-2010

## Answers

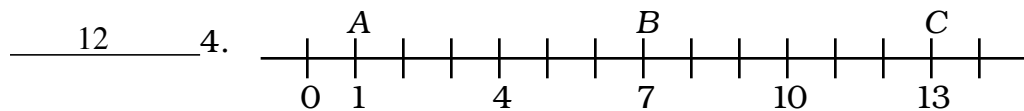
Questions are worth 2-2-2-4-4 points respectively.  
Remember your units.



7 1.  $10 - |-3| = 10 - 3 = 7$

57.84 2.  $0.04 + 57.8 = 57.84$

36 3.  $1 \cdot 9 \cdot 4 = 36$

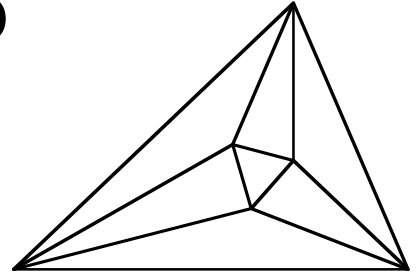


35 5.  $10^2 - 1, 9^2 - 1, 8^2 - 1, 7^2 - 1, 6^2 - 1 = 36 - 1 = 35$

# Meet 2 - Event B 2009-2010

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

**NO CALCULATORS ALLOWED**



\_\_\_\_\_ 1. Solve for  $x$ :

$$3(x - 4) = -3$$

\_\_\_\_\_ 2. Simplify:

$$2(x + 3) - 4(x - 1) - (5 + x) = ?$$

\_\_\_\_\_ 3.  $\frac{49!}{48!} = ?$

\_\_\_\_\_ 4. Solve for  $x$ :

$$x! = 720$$

\_\_\_\_\_ 5. If one value of  $x$  is  $-5$ , what is the other value of  $x$ ?

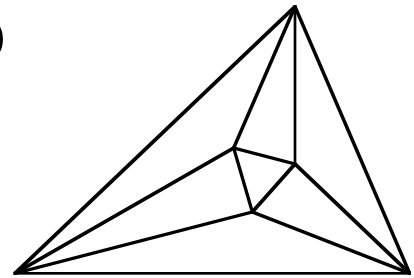
$$|x - 4| = d$$

Name \_\_\_\_\_ School \_\_\_\_\_

# Meet 2 - Event B 2009-2010

## Answers

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



3 1.  $3x - 12 = -3$ ,  $3x = 9$ ,  $x = 3$

$-3x + 5$  2.  $2x + 6 - 4x + 4 - 5 - x = -3x + 5$

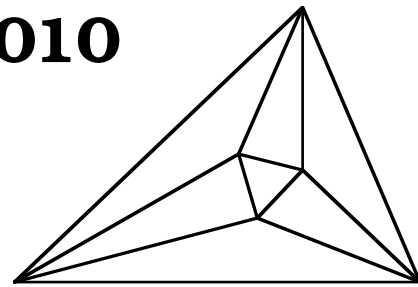
49 3.  $\frac{49!}{48!} = \frac{48!49}{48!} = 49$

6 4.  $720 = 9 \cdot 8 \cdot 2 \cdot 5 = 3 \cdot 3 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 5 = 1 \cdot 2 \cdot 3 \cdot 4 \cdot 5 \cdot 6 = 6!$

13 5.  $|-5 - 4| = |-9| = 9 = d$ ,  $|x - 4| = 9$ ,  $x - 4 = 9$ ,  $x = 13$

# Meet 2 - Team Event 2009-2010

Questions are worth 4 points each.  
Remember your units.



## NO CALCULATORS ALLOWED

\_\_\_\_\_ 1. If 5 is the midpoint of  $A$  and  $B$ , 11 is the midpoint of  $B$  and  $C$ , and  $A$  is 4 units less than  $B$ , where is  $C$ ?

$y =$  \_\_\_\_\_ 2.  $y + a = bx$  Solve for  $y$  in terms of  $x$ .

\_\_\_\_\_ 3. Solve for  $y$  when  $x=3$ :  $3y - 2x = 12$ .

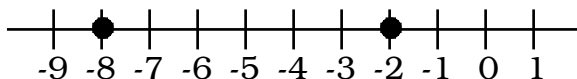
\_\_\_\_\_ 4. Solve for both values of  $x$ :  $|2x + 1| = 7$ .

\_\_\_\_\_ 5. Solve for  $x$  in terms of  $a$ :  $2(3 - ax) = 4$ .

\_\_\_\_\_ 6. Find the point one-fourth of the way from 12 to  $-4$ .

\_\_\_\_\_ 7. In the sequence  $2^1, 2^2, 2^3, 2^4, 2^5, 2^6, \dots$ , the numerical values of the sixth term is 64. What would be the one's digit in the value of the 200th term?

\_\_\_\_\_ 8. Write the absolute value equation for this graph.



\_\_\_\_\_ 9. Write  $4!(23!)$  as one factorial.

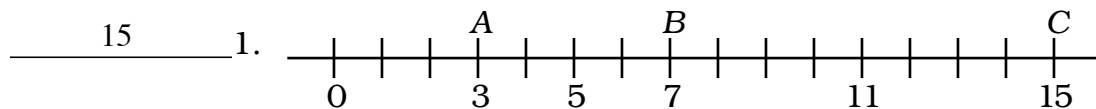
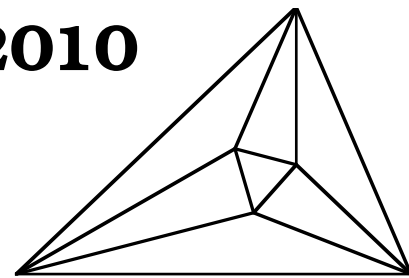
\_\_\_\_\_ 10. Solve for  $x$ :  $3(x - 1) - 2(4 + x) = 10$ .

# Meet 2 - Team Event

# 2009-2010

## Answers

Questions are worth 4 points each.  
Remember your units.



2.  $y = bx - a$

$$\begin{array}{r} y + a = bx \\ -a \quad -a \\ \hline y = bx - a \end{array}$$

3. 6  $3y - 6 = 12, 3y = 18, y = 6$

4. -4, 3  $2x + 1 = 7, 2x = 6, x = 3$  or  $2x + 1 = -7, 2x = -8, x = -4$

5.  $\frac{1}{a}$   $3 - ax = 2, -ax = -1, x = \frac{-1}{-a} = \frac{1}{a}$

6. 8 Halfway is  $\frac{12 + 4}{2} = \frac{8}{2} = 4$ . Halfway from 12 to 4 is  $\frac{12 + 4}{2} = \frac{16}{2} = 8$ .

7. 6  $2, 4, 8, 16, 32, 64, 128, 256, \dots, 2^{200}$ . There is a pattern in the one's digit that repeats every 4 terms.  $200/4 = 50$  so  $2^{200}$  will end in the same digit as  $2^4$ .

8.  $|x+5|=3$  The center is  $\frac{-8 + -2}{2} = -5$  so both -8 and -2 are 3 units from -5, so  $|x+5|=3$

9. 24!  $4! = 2 \cdot 3 \cdot 4 = 24, 23! \cdot 24 = 24!$

10. 21  $3x - 3 - 8 - 2x = 10, x - 11 = 10, x = 21$