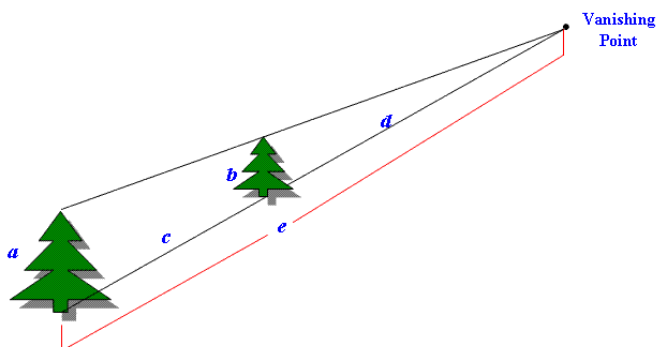


## Math 116: Written Homework Set 5

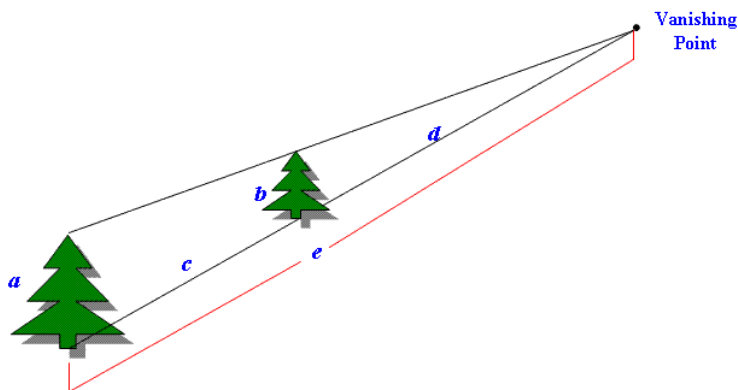
**This assignment is due on Monday, October 17<sup>th</sup> in class. Show all work where possible! Answers magically appearing will receive no credit.**

1. Use the picture below and the values of  $a$ ,  $b$ ,  $c$ ,  $d$ , and  $e$  to find the missing value.

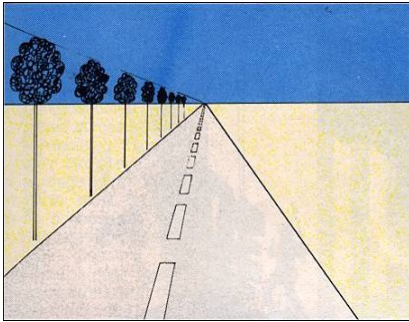
If  $a = 10$  in,  $d = 18$  in, and  $e = 30$  in, find  $b$  and  $c$ . Round your answer to 2 decimal places.



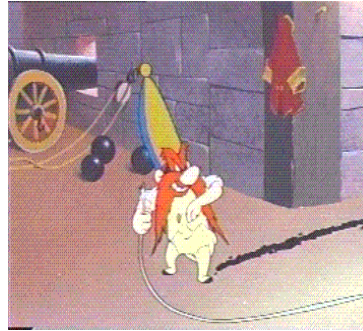
2. Use the picture in the above problem and the values of  $a$ ,  $b$ ,  $c$ ,  $d$ , and  $e$  to find the missing value. If  $a = 5$  in,  $b = 3$  in, and  $e = 12$  in, find  $c$  and  $d$ . Round your answer to 2 decimal places.



3. For each the following pictures, the dominant perspective is either overlapping shapes, atmospheric, diminishing sizes, one point perspective, or very little perspective is used. In the blank following the picture, list the best answer for the dominant perspective (note that no two types of perspective should occur more than once in your answers).



Answer: \_\_\_\_\_



Answer: \_\_\_\_\_



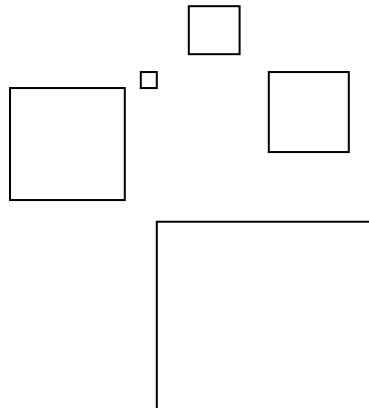
Answer: \_\_\_\_\_



Answer: \_\_\_\_\_

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e.



Answer: \_\_\_\_\_

4. Determine the exact value of each of the following expressions.
  - a.  $\log_7 49$
  - b.  $\log_2 16$
  
5. Use a calculator to approximate each of the following quantities to the nearest hundredth.
  - a.  $\log 20$
  - b.  $\log\left(\frac{512}{3}\right)$
  - c.  $\log_3 31$  (Use the change of base formula)
  
6. Solve the equation  $3^{4x} = 11$  for  $x$ .

**Selected Answers**

1.  $b = 6, c = 12$

4. a. 2

5. a.  $\approx 1.30$

6.  $\approx 0.55$