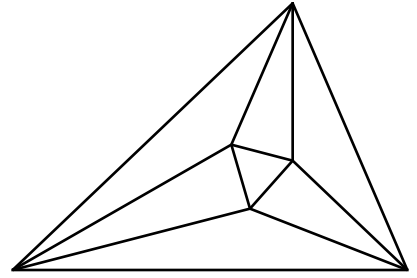
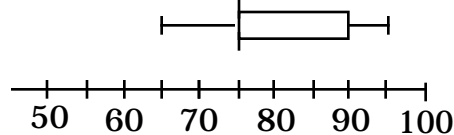


Meet 5 - Event A 2000-2001

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



_____ 1. Mr. Dodge made this box and whisker plot of the test scores of his 32 students. What is the range of test scores?



_____ 2. In Mr. Dodge's class, what is the median score?

_____ 3. What is the interquartile range?

_____ 4. What is the smallest number of students that could have a score of 75?

_____ 5. a. What is the mean of the scores on this stem and leaf plot?

_____ b. What is the mode?

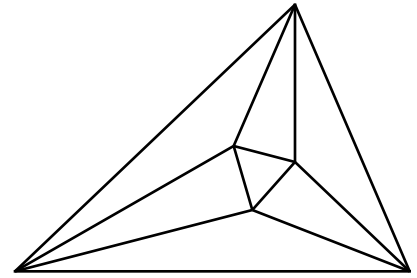
15		3	3	3
14		4	5	6
13		0	1	

Name _____ School _____

Meet 5 - Event A 2000-2001

Answers

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



30 1. $95-65=30$

75 2. The median is marked at 75

15 3. $90-75=15$

10 4. $32/4=8$ scores in each quartile. For the median to be 75 and the 2nd quartile to be 75, there must be nine scores of 75. Since 32 is an even number, the median score is an average of the 16th and 17th scores and since they can't be 74 and 76, they both are 75. The lower quartile is an average of the 8th and ninth scores, so they are both 75.

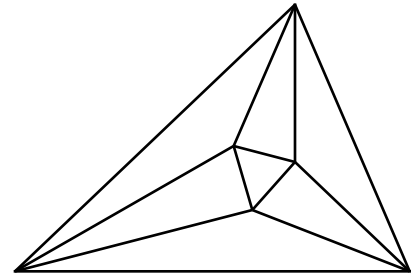
6	
6	5 5 5 5
7	0 0 0
7	5 5 5 5 5 5 5 5 5 5
8	0 0 0 0 0 0
8	
9	2 2 2 2
9	5 5 5 5

(2 pts) 144.375 5. a $\frac{153 \times 3 + 144 + 145 + 146 + 130 + 131}{8} = \frac{1155}{8}$

(2 pts) 153 b Mode=Most frequent

Meet 5 - Event B 2000-2001

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



_____ 1. Simplify: $\frac{x^2 + 3x}{x}$

_____ 2. A spherical balloon has a diameter of 8 inches. How much air does it contain, to the nearest tenth?

_____ 3. Find one numerical equivalent value for $\sum_{i=1}^4 (2 + i)^i$

_____ 4. Tracy has a 3 in 5 chance to make a successful free throw in basketball. What is Tracy's chance of making two free throws in a row?

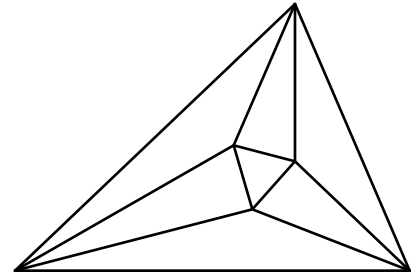
_____ 5. If the surface area of a rectangular prism is 94cm^2 and the length and width are 5cm and 4cm respectively, what is the height?

Name _____ School _____

Meet 5 - Event B 2000-2001

Answers

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

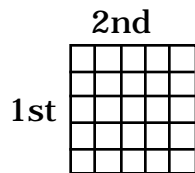


 $x + 3$ 1. $\frac{x(x+3)}{x} = x + 3$

268.1 cu in 2. $D = 8\text{in} \Rightarrow r = 4\text{in} \quad V = \frac{4}{3}\pi(4)^3 = 268.08$

 1440 3. $(2+1)^1 + (2+2)^2 + (2+3)^3 + (2+4)^4 = 3 + 16 + 125 + 1296 = 1440$

 9 in 25 4.
or $\frac{9}{25}$ or 0.36



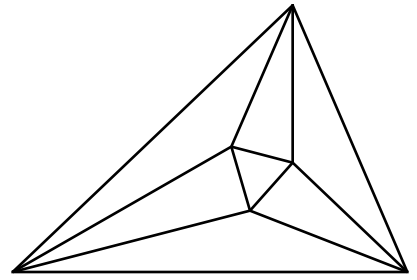
$$\frac{3}{5} \times \frac{3}{5} = \frac{9}{25}$$

 3 cm 5.

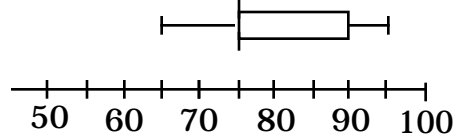
$$S = 2(5 \times 4) + 2(5 \times h) + 2(4 \times h)$$
$$94 = 40 + 10h + 8h = 40 + 18h$$
$$54 = 18h$$
$$h = 3$$

Meet 5 - Event C 2000-2001

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



- _____ 1. Mr. Dodge made this box and whisker plot of the test scores of his 32 students. What is the range of test scores?



- _____ 2. What is the smallest number of students that could have a score of 75?

- _____ 3. Which is/are correct?

- A. $\sqrt{m^2 + n^2} = m + n$
- B. $\sqrt{(p - q)^2} = p - q$ if $p > q$
- C. $\sqrt{k^2 - l^2} = k - l$ if $k > l$
- D. $-\sqrt{m^2 + n^2} = -m - n$

- _____ 4. If the volume of a cylindrical solid is 144 cm^3 and the diameter is twice the height, what is the radius, to 3 significant figures?

- _____ 5. a. What is the mean of the scores on this stem and leaf plot?

- _____ b. What is the mode?

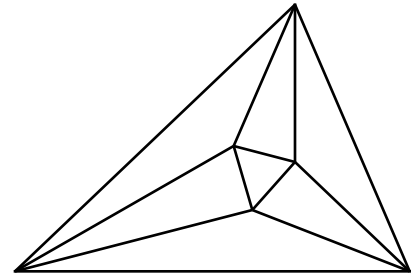
15		3	3	3
14		4	5	6
13		0	1	

Name _____ School _____

Meet 5 - Event C 2000-2001

Answers

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



30 1. $95-65=30$

10 4. $32/4=8$ scores in each quartile. For the median to be 75 and the 2nd quartile to be 75, there must be nine scores of 75. Since 32 is an even number, the median score is an average of the 16th and 17th scores and since they can't be 74 and 76, they both are 75. The lower quartile is an average of the 8th and 9th scores, so they are both 75.

6	
6	5 5 5 5
7	0 0 0
7	5 5 5 5 5 5 5 5 5
8	0 0 0 0 0 0 0
8	
9	2 2 2 2
9	5 5 5 5

B 3. Examples: $\sqrt{4^2 + 3^2} = 5 \neq 4 + 3$
 $\sqrt{(4 - 3)^2} = 4 - 3 = 1$
 $\sqrt{4^2 - 3^2} = \sqrt{7} \neq 4 - 3$
 $-\sqrt{4^2 + 3^2} = -5 \neq -4 - 3$

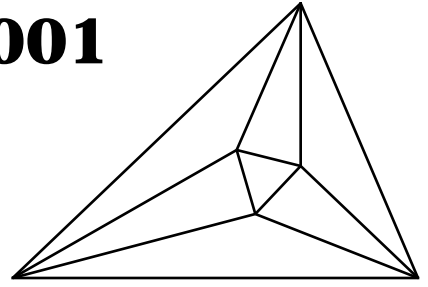
3.58cm 4. $V = \pi r^2 h$ and $D = 2r = 2h$ so $r = h$
 $144 = \pi r^2 r = \pi r^3$
 $r = \sqrt[3]{144/\pi} = 3.5788$

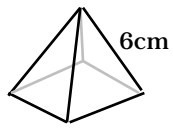
(2 pts) 144.375 5. a $\frac{153 \times 3 + 144 + 145 + 146 + 130 + 131}{8} = \frac{1155}{8}$

(2 pts) 153 b Mode=Most frequent

Meet 5 - Team Event 2000-2001

Questions are worth 4 points each.
Remember your units.



- _____ 1. What is the median value of these numbers?
9, 8, 6, 1, 8, 3, 2, 7, 8, 1, 5, 5
- _____ 2. What is the mean of the twelve numbers in problem 1.
- _____ 3. What percent of the data is represented by the box in a box and whisker plot?
- $\sum_{k=2}^6$ _____ 4. Find the sigma notation expression for $4+8+16+32+64$, using $k=2$ as the lower limit.
- _____ 5. Write as a trinomial: $(2x - 1)(x + 7)$
- _____ 6. Two numbers were accidentally left off this list. If the mean of the complete list is 11 and the mode is 12, what are the two missing numbers? 4, 5, 20, 15, 12, 9, 13, 19, 10, ____, ____
- _____ 7. If the side of a cube is doubled, what happens to the volume?
- _____ 8. Find the one numerical value for $\sum_{a=1}^5 (-1)^a (3 - a)$
- _____ 9. A square pyramid is made from 8 toothpicks, each 6 cm long. Calculate the volume, to the nearest tenth.
- 
- _____ 10. Concrete is ordered by the cubic yard. If the driveway is 36 feet by 45 feet and the concrete is 4 inches thick, how much concrete should be ordered?

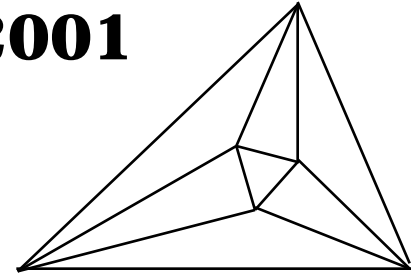
School _____

Meet 5 - Team Event

2000-2001

Answers

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



5.5 1. Put in order: 1, 1, 2, 3, 5, 5, 6, 7, 8, 8, 8, 9. $(5+6)/2=5.5$

5.25 2. $63/12=5.25$

50% 3. The box represents the middle 50%.

$\sum_{k=2}^6 2^k$ 4. $2^2 + 2^3 + 2^4 + 2^5 + 2^6$

$2x^2 + 13x - 7$ 5. $2x^2 + 14x - x - 7 = 2x^2 + 13x - 7$

2 and 12 6. At least one missing number is 12 to make 12 the mode
 $\frac{119 + x}{11} = 11, \quad 119 + x = 121, \quad x = 2$

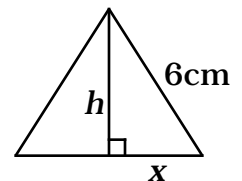
times 8 7. $V = s^3, \quad V = (2s)^3 = 8s^3$

0 8. $-1(2)+1(1)-1(0)+1(-1)-1(-2)=-2+1-1+2=0$

50.9cm^3 9. $V = \frac{1}{3} A_{\text{base}} \times h = \frac{1}{3} \times 36 \times h = 12h$ $x =$ half the diagonal of the square

$$x = \frac{1}{2} \sqrt{6^2 + 6^2} = \frac{1}{2} \sqrt{72} = \frac{1}{2} \cdot 6\sqrt{2} = 3\sqrt{2}$$

$$h = \sqrt{6^2 - (3\sqrt{2})^2} = \sqrt{36 - 18} = \sqrt{18} \quad V = 12\sqrt{18} = 50.9\text{cm}^3$$



20 cu yds 10. $36 \text{ ft} = 12 \text{ yards}, \quad 45 \text{ ft} = 15 \text{ yards}, \quad 4 \text{ in} = \frac{4}{36} = \frac{1}{9} \text{ yard}$

$$V = 12 \times 15 \times \frac{1}{9} = 20$$