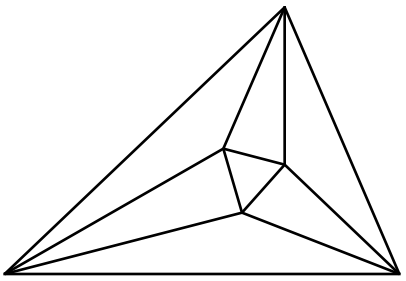
Meet 5 - Event A 2003-2004



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

a._____1. Given: 30, 17, 22, 30.
a. What is the median?
b._____ b. What is the mode?

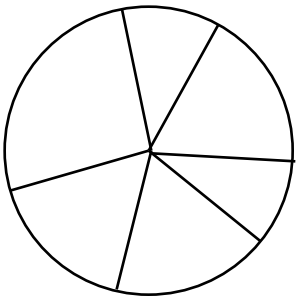
_____2. Find the mean of the numbers in this stem and leaf plot.

7	0 1 5
6	2 4 7
5	8 8

_____3. If the numbers in problem 2 are the scores on a math quiz and Zack is a student with his score on that plot, what is the probability that Zack's score is 58?

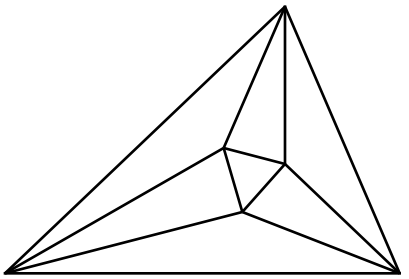
_____%4. When the side of a cube is increased by 20%, by what percent is the volume increased?

_____5. What is the mean measure of these angles at the center of this circle?



Name_____School_____

Meet 5 - Event A 2003-2004 Answers



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

a. 26 1. Reorder: 17, 22, 30, 30; $\frac{22+30}{2} = 26$ is the median, 30 is the mode

b. 30

65.625 2. $\frac{(70+71+75+62+64+67+58+58)}{8} = 65.625$

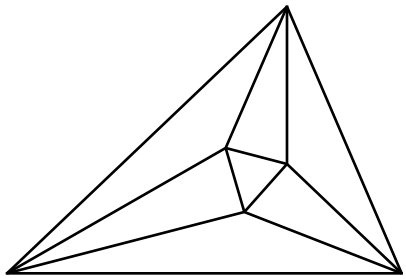
0.25 3. There are 2 scores of 58. $\frac{2}{8} = \frac{1}{4} = 0.25$

or $\frac{1}{4}$

72.8% 4. If the side = 1, the volume = $1^3 = 1$.
If the side = 1.2, the volume = $(1.2)^3 = 1.728$.
$\frac{0.728}{1} \times 100 = 72.8\%$

60° 5. $\frac{360°}{6} = 60°$

Meet 5 - Event B 2003-2004



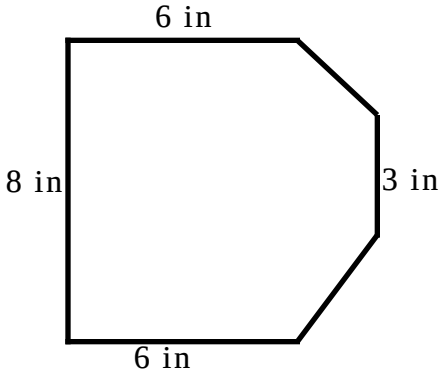
Questions are worth 2-2-2-4-4 points respectively.
Remember your units.

$\sum_{n=3}^{8}$ _____ 1. Write this series in sigma notation using *n* as the index, starting at 3 and ending at 8: $9+16+25+36+49+64$.

_____ ft^3 2. A grandfather clock came in a wooden box 18 inches by 24 inches by 6 feet. Find the volume of the box in cubic feet.

_____ 3. Write as a trinomial (3 terms): $(3-x)(x+2)$.

_____ 4. Two corners were cut off a square piece of paper. Find the area of the new shape.



_____ 5. There are two lunar days (the length of time the moon is above the horizon) in this chart. Calculate the length of each lunar day.

_____

Date	Rise	Set
12/10	12:46	23:19
12/11	13:06	
12/12	13:24	00:24

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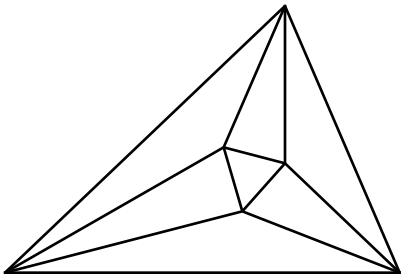
Meet 5 - Event B 2003-2004

Answers



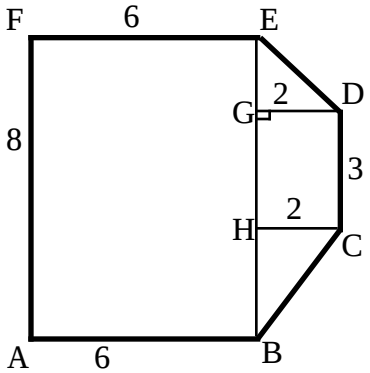
Questions are worth 2-2-2-4-4 points respectively.
Remember your units.

$\sum_{n=3}^{8} n^2$ 1. $3^2 + 4^2 + 5^2 + 6^2 + 7^2 + 8^2 = \sum_{n=3}^{8} n^2$

18ft^3 2. $1.5 \times 2 \times 6 = 18\text{ft}^3$

$-x^2 + x + 6$ 3. $(3 - x)(x + 2) = 3x + 6 - x^2 - 2x = -x^2 + x + 6$
in any order

59in^2 4.



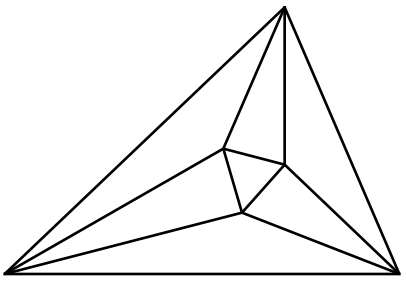
$ABEF = 6 \times 8 = 48\text{in}^2$
$DGHC = 2 \times 3 = 6\text{in}^2$
GED and HCB make one triangle
with area $= \frac{1}{2}(5)(2) = 5\text{in}^2$
$A = 48 + 6 + 5 = 59\text{in}^2$

10 hr 33 min 5. $23{:}19 - 12{:}46 = 22{:}79 - 12{:}46 = 10\text{ hr } 33\text{ min}$
$24{:}24 - 13{:}06 = 11\text{ hr } 18\text{ min}$

11 hr 18 min

or 10:33, 11:18
(2 pts for each answer)

Meet 5 - Event C 2003-2004



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

_____1. Expand: $(a-b)^2$.

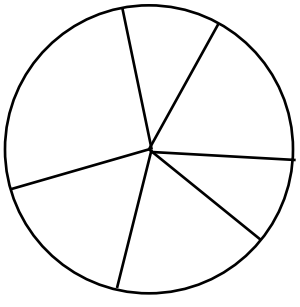
_____2. What is the mean of these terms: $3x$, x, $4x$, $8x$?

_____3. Find the median of the data in this stem and leaf plot.

7	0 1 5
6	2 4 7
5	8 8

_____%4. When the side of a cube is increased by 20%, by what percent is the volume increased?

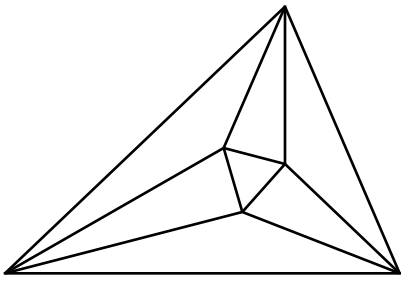
_____5. What is the mean measure of these angles at the center of this circle?



Name_____School_____

Meet 5 - Event C 2003-2004

Answers



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

$a^2 - 2ab + b^2$ 1. $(a-b)(a-b) = a^2 - 2ab + b^2$

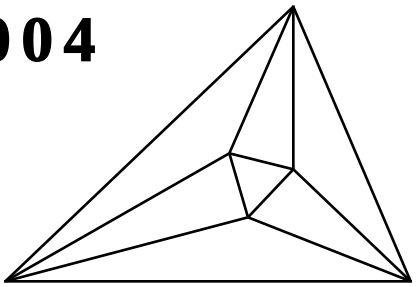
$4x$ 2. $\frac{3x + x + 4x + 8x}{4} = \frac{16x}{4} = 4x$

65.5 3. Ordered: 58, 58, 62, 64, 67, 70, 71, 75; median $= \frac{64 + 67}{2} = 65.5$

72.8% 4. If the side = 1, the volume = $1^3 = 1$.
If the side = 1.2, the volume = $(1.2)^3 = 1.728$.
$\frac{0.728}{1} \times 100 = 72.8\%$

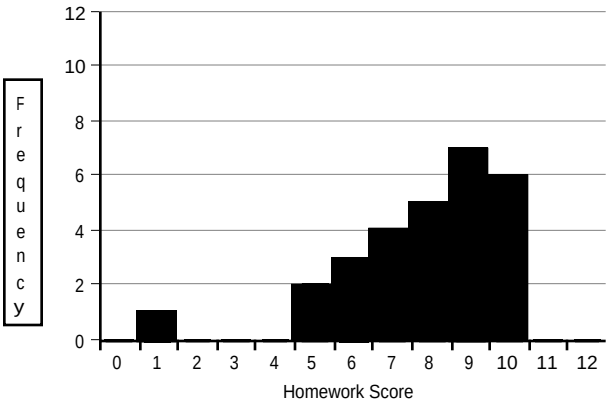
$60°$ 5. $\frac{360°}{6} = 60°$

Meet 5 - Team Event 2003-2004



Questions are worth 4 points each.
Remember your units.

Problems 1-7 refer to the histogram to the right
All the homework scores are whole numbers from 0 to 10.



_____1. How many students had homework scores?

_____2. What is the range of the homework scores?

_____3. What is the mean of the homework scores, to 3 significant figures?

_____4. What is the median of the homework scores?

_____5. What is the mode of the homework scores?

_____6. What is the outlier?

_____7. Is the distribution symmetric, skewed left, or skewed right?

_____8. Sandy's nerf ball has a diameter of 6 inches. What is the volume, to the nearest hundredth?

_____9. A tall can of chili has a diameter of 10 cm and a height of 17 cm. A short can has a diameter of 7.5 cm and height of 11 cm. How much more chili does the tall can have, to the nearest tenth?

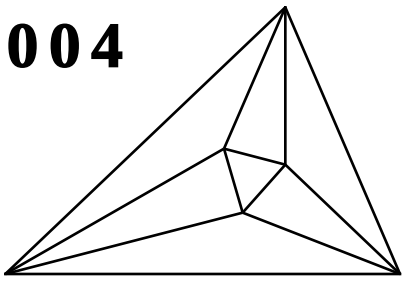
_____10. Expand and simplify. Write in descending order.

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

School_____

Meet 5 - Team Event 2003-2004

Answers



Questions are worth 4 points each.
Remember your units.

28 1.

9 2. $10-1=9$

7.86 3. $(1+2(5)+3(6)+4(7)+5(8)+7(9)+6(10))/28=7.86$

8 4. Both the 14th and 15th scores are 8.

9 5. The score of 9 has the highest bar.

1 6.

skewed left 7. The tail is to the left.

$113.10\ \text{in}^3$ 8. $V=\frac{4}{3}\pi r^3, r=3", V=\frac{4}{3}\pi(3)^3=113.09733$

$849.2\ \text{cm}^3$ 9. $V=\pi r^2 h, V_T=\pi\bullet 5^2\bullet 17=425\pi, V_S=\pi\bullet 3.75^2\bullet 11=154.6875\pi$
Difference = 1335.177 - 485.965 = 849.212

$10x^3+23x^2-65x+12$ 10. $(2x^2+8x-3x-12)(5x-1)=(2x^2+5x-12)(5x-1)=$
$10x^3-2x^2+25x^2-5x-60x+12=10x^3+23x^2-65x+12$