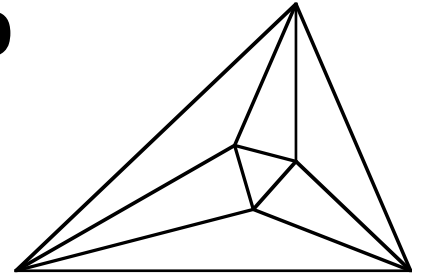


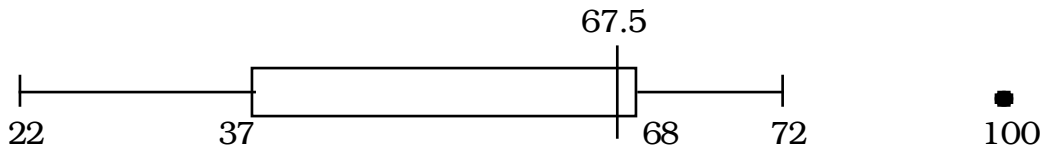
Meet 5 - Event A 2008-2009

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



_____ 1. What is the intersection of the lines $y = -2$ and $x = 3$?

_____ 2. In this box and whisker plot, what is the range?



_____ 3. In the plot in problem 2, what is the data point at 100 called?

mean= _____ 4. If all the data for the box and whisker plot in problem 2 are integers, write down the value for two of the measures: mean, median, mode.

median= _____

mode= _____

a. _____ 5. In a deck of cards for playing a fish game, there are 5 cards picturing a trout, 5 with a walleye, 5 with a sunfish, 5 with a muskie, 5 with a northern, and 5 with a bass. Each of the five cards with the same fish is a different color: red, green, blue, orange, and white. The deck is well shuffled.

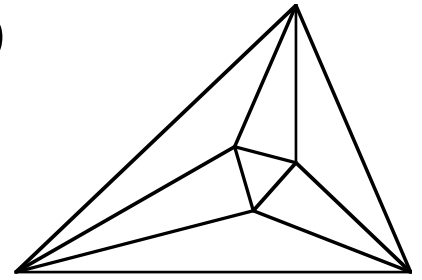
b. _____
a. What is the probability the first card dealt is a muskie?
b. The first three cards dealt are blue sunfish, blue trout and white walleye. What is the probability the next card is red?

Name _____ School _____

Meet 5 - Event A 2008-2009

Answers

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



(3,-2) 1. $(x, y) = (3, -2)$

78 2. $100 - 22 = 78$

outlier 3.

mean= 4. There is no way to calculate the mean. The median is the average of 67 and 68. The mode is 68 because one fourth of the data is between 67.5 and 68, so it is all 68. The other quartiles contain more than one value.

median=67.5

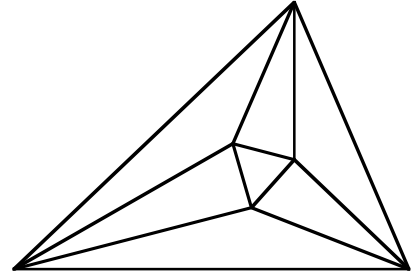
mode=68

a. $\frac{1}{6}$ 5. 5 out of 30 = $1/6$

b. $\frac{2}{9}$ There are 6 red cards still in the deck of 27 not yet dealt. $6/27=2/9$

Meet 5 - Event B 2008-2009

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



_____ 1. Write as a trinomial in decreasing order: $(2x - 1)(x + 6)$.

_____ 2. What is the volume of a box measuring 1 foot by 8 inches by 1 inch?

_____ 3. What is the volume of a cone with a diameter of 10 cm and a height of 12 cm, in terms of π ?

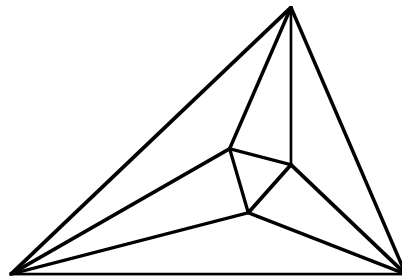
_____ 4. What point is on both $3x - 2y = 6$ and $y = x + 1$?

_____ 5. Simplify: $\frac{x^2 + 2x + 1}{x + 1}$.

Meet 5 - Event B 2008-2009

Answers

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



$2x^2 + 11x - 6$ 1. $(2x - 1)(x + 6) = 2x^2 + 12x - x - 6 = 2x^2 + 11x - 6$

96in^3 2. 1 foot = 12 inches $V = 12 \times 8 \times 1 = 96\text{in}^3$

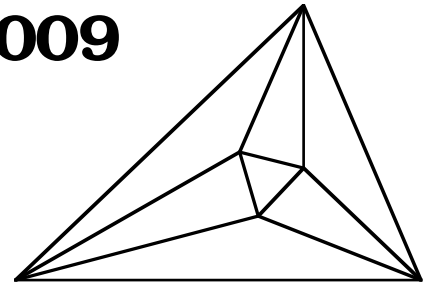
$100\pi\text{cm}^3$ 3. $V = \frac{1}{3}\pi r^2 h = \frac{1}{3}\pi 5^2 \cdot 12 = 100\pi\text{cm}^3$
or 100π cc

(8,9) 4. $3x - 2(x + 1) = 6, 3x - 2x - 2 = 6, x = 8, y = 8 + 1 = 9$

$x + 1$ 5. $\frac{x^2 + 2x + 1}{x + 1} = \frac{\cancel{(x+1)}(x+1)}{\cancel{(x+1)}} = x + 1$ or

$$\begin{array}{r} x+1 \\ x+1 \overline{)x^2+2x+1} \\ \underline{-(x^2+x)} \\ x+1 \\ \underline{-(x+1)} \\ 0 \end{array}$$

Meet 5 - Team Event 2008-2009



Questions are worth 4 points each.
Remember your units.

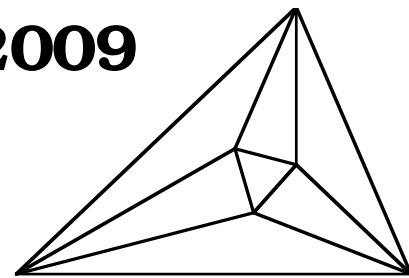
- _____ 1. What is the area of a triangle formed by $y = 3x$, $y = -\frac{3}{2}x + 9$, and the x -axis?
- _____ 2. Where do these lines intersect: $y = \frac{3}{7}x - 14$ and $y = \frac{3}{7}x + 20$?
- _____ 3. Simplify: $\frac{6x^2 + 7x - 5}{2x - 1}$.
- _____ 4. There are 24 cans in a box measuring 6" by 8" by 7" high. The cans are arranged in two layers with 3 cans by 4 cans in each layer. What is the volume of one can in terms of π ?
- _____ 5. One can has a radius of 2" and a height of 2". If 24 cans are packed in a box in two layers with 3 cans by 4 cans in each layer, what is the volume of empty space in the box if the cans fit exactly? Answer to the nearest tenth.
- _____ 6. The Student Council held a school dance. The expensed were \$500 and the tickets sold for \$10 each. How many tickets must be sold before the Student Council is making a profit?
- x = _____ 7. What x value satisfies both of these equations: $2x - 3y = 1$, $9x + 2y = 8$?
- _____ 8. If the side of a cube increases by 40%, by what percent does the volume increase?
- _____ 9. My white exercise ball has a diameter of 55 cm when fully inflated. What volume of air does it contain, to the nearest whole number?
- _____ 10. Simplify and write in decreasing order: $2x - x^4 + 3x^2 - 5x + 9x^4 + 10$.

Meet 5 - Team Event

2008-2009

Answers

Questions are worth 4 points each.
Remember your units.



- 18 sq. units 1. The lines intersect at (2, 6) since $3x = -\frac{3}{2}x + 9 \Rightarrow x = 2, y = 6$. The lines
(units required) intersect the x -axis at (0, 0) and (6, 0) since $0 = -\frac{3}{2}x + 9 \Rightarrow x = 6$.
Base=6-0=6, Height=6. So area = $\frac{1}{2}(6)(6) = 18$
- Nowhere 2. Since the lines have the same slope, they are parallel and never intersect
- 3x+5 3. $\frac{6x^2 + 7x - 5}{2x - 1} = \frac{(2x - 1)(3x + 5)}{2x - 1} = 3x + 5$
- $\frac{7\pi}{2}$ in³
or 3.5 π in³ 4. $7" \div 2 = 3.5"$ high. $6" \div 3 = 2"$ and $8" \div 4 = 2"$. Diameter=2", $r = 1"$.
(units required) $V = \pi r^2 h = \pi \cdot 1^2 \cdot 3.5 = 3.5\pi = \frac{7\pi}{2}$
- 164.8in³ 5. $V_{\text{can}} = \pi 2^2 \cdot 2 = 8\pi$, 24 cans = $24 \cdot 8\pi = 192\pi \text{in}^3$ Box: $3 \times 4" = 12"$ by $4 \times 4" = 16"$
(units required) by $2 \times 2" = 4"$. $V_{\text{Box}} = 12 \times 16 \times 4 = 768 \text{in}^3$. Empty space = $768 - 192\pi = 164.814 \text{in}^3$
- 51 6. $500 < 10x, \quad x > 50$
- $x = \frac{26}{31}$ 7. $2(2x - 3y = 1) = 4x - \cancel{6y} = 2$
 $3(9x + 2y = 8) = \underline{27x + \cancel{6y} = 24}$
 $31x = 26$
- 174.4% 8. Let the side=1", so the increased side=1.4" $V_1 = 1^3, V_2 = 1.4^3 = 2.744$
Increase = $2.744 - 1 = 1.744$
- 87114cm³ 9. $d = 55, r = 27.5, V = \frac{4}{3}\pi r^3 = \frac{4}{3}\pi(27.5)^3 = 87113.7 \text{cm}^3$ or cc
(units required)
- $8x^4 + 3x^2 - 3x + 10$ 10. $-x^4 + 9x^4 + 3x^2 + 2x - 5x + 10 = 8x^4 + 3x^2 - 3x + 10$