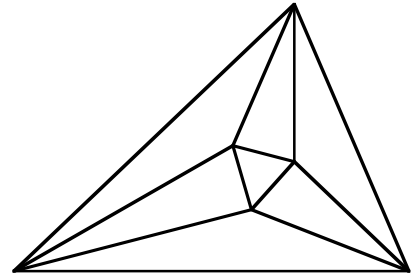# Meet 3 - Event A   2007-2008

Questions are worth 2-2-2-4-4 points respectively.
<u>Remember your units.</u>

_____1. Solve for x as a quotient of relatively prime numbers:
$$4 - 6x = 14$$

_____$^{\%}$2. In the bag of Halloween candy were 10 Krackels, 14 Special Dark, and 18 Milk Chocolate. What percent of the candies were Special Dark?

_____3. Three fourths is to one third as four fifths is to n. What is n as a quotient of relatively prime numbers?

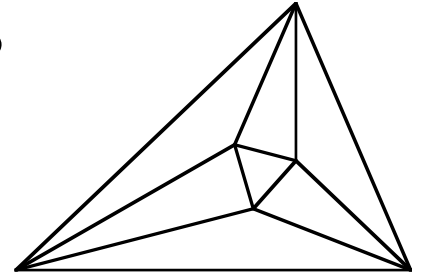_____4. A large rectangle had several rectangular pieces cut out of it. What is the perimeter of the remaining piece?
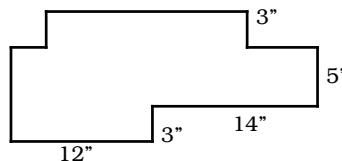
_____5. Solve for x: $3(x + 5) = 4(x - 2)$

Name_____   School_____

Meet 3 - Event A 2007-2008
Answers

Questions are worth 2-2-2-4-4 points respectively.
<u>Remember your units.</u>

$-\dfrac{5}{3}$ _____ 1. $4-6x=14,\ \ -6x=10,\ \ x=-\dfrac{10}{6}=-\dfrac{5}{3}$

$33.\overline{3}\%$ _____ 2. $10+14+18=42$ total, $\ \dfrac{14}{42}\times100=33.\overline{3}\%$

$\dfrac{16}{45}$ _____ 3. $\dfrac{3/4}{1/3}=\dfrac{4/5}{n}$, so $n=\dfrac{\frac{1}{3}\times\frac{4}{5}}{\frac{3}{4}}=\dfrac{4}{15}\times\dfrac{4}{3}=\dfrac{16}{45}$

$74"$ _____ 4. The horizontal lines add up to $2(12+14)=52$
or 6' 2"   The vertical lines add up to $2(3+5+3)=22$
         Perimeter $=52+22=74"$

23 _____ 5. $3x+15=4x-8,\ \ 15=x-8,\ \ x=23$
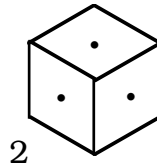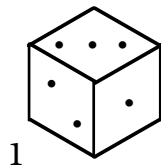
Meet 3 - Event B   2007-2008

Questions are worth 2-2-2-4-4 points respectively.
<u>Remember your units.</u>
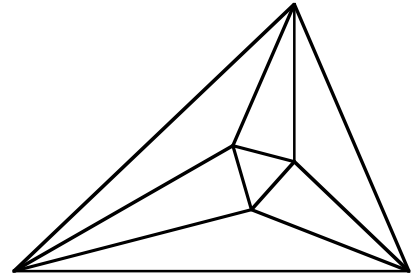
_____1. Solve for x: $3(2-x)+7=5x-3$

_____2. A bowling ball rolled 12 feet in 2 seconds. What was its average speed?

_____3. Each face of a cube has one, two, or three dots on it. Below are two views of the same cube. How many dots are on the face opposite the face with 3 dots?

1   2

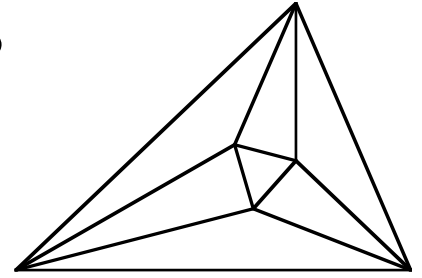_____4. A jar with a lid costs $1.50. The jar costs $1.40 more than the lid. How much does the lid cost?

_____5. Mia ran around a circular track in 8.7 seconds. If her speed was 9 feet per second, what was the diameter of the track, to the nearest foot?

Name_____School_____

Meet 3 - Event B   2007-2008
Answers

Questions are worth 2-2-2-4-4 points respectively.
<u>Remember your units.</u>

_____2_____1. $6 - 3x + 7 = 5x - 3$, $13 - 3x = 5x - 3$, $13 = 8x - 3$, $16 = 8x$, $x = 2$

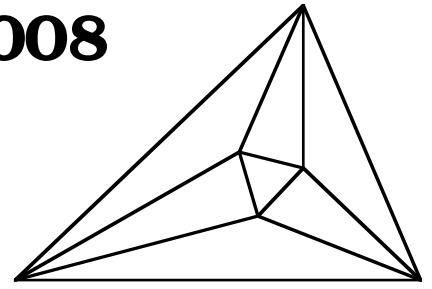____6 ft/sec____2. $\dfrac{12 \text{ ft}}{2 \text{ sec}} = 6$ ft/sec

_____1_____3. From view 2, one of the 1 dot faces must be opposite the 3 dot face.

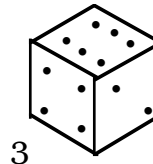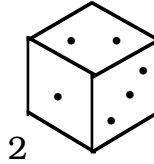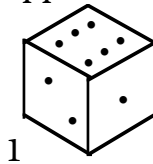____$0.05____4. jar + lid $= (1.40 + x) + x = 1.50$, $2x = 0.10$, so $x = 0.05$
   or 5¢

____25 ft____5. $9\ \dfrac{\text{ft}}{\text{sec}} \times 8.7$ sec $= 78.3$ ft, $\pi d = 78.3$, $d = 24.9$

Meet 3 - Team Event   2007-2008

Questions are worth 4 points each.
<u>Remember your units.</u>

_____1. The figure shows three views of the same cube. How many dots are on the face opposite the face with 6 dots?

1   2   3

_____2. My house went up in value 5% last year. If it is now worth $300,000, what was it worth last year, to the nearest hundred?

_____3. What percent of 50 is 600?

_____4. The video game cost $98 plus 6 1/2 % tax. How much must you pay for the video game?

_____5. Solve for x: $\dfrac{x-7}{15} = \dfrac{1}{3}$

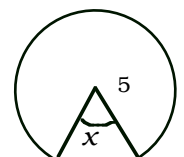_____6. How many distinct squares are in this figure?
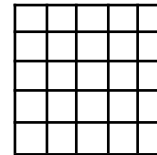
_____7. In a magic square, the sum of each row, column, and diagonal is the same. In this magic square, compute x.

	14	20
x		
	25	

_____8. Solve for x: $3(x-4) - 2(3-x) = 22$.

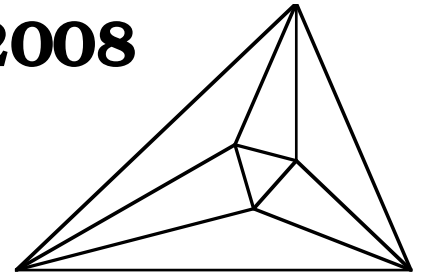_____9. If the radius is 5 in. and the perimeter is 36.18 in., what is the angle, to the nearest degree?

_____10. Solve for x: $ax + b = c$

School_____

Meet 3 - Team Event   2007-2008 Answers

Questions are worth 4 points each.
<u>Remember your units.</u>

_____3_____ 1. From view 2, 6 is opposite either 1, 2, or 3. From the orientation of the 6 dots in view 3, 1 is opposite 4. From view 2, 2 is opposite 2 and 3 is opposite 6

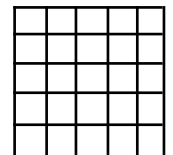____$285,700____ 2. $1.05x = 300,000, \quad x = 285,714$

_____1200%_____ 3. $\dfrac{x}{100} = \dfrac{600}{50}, \quad x = 1200$

____$104.37_____ 4. $\$98(1.065) = \$104.37$

_____12_____ 5. $3(x-7) = 1(15), \quad 3x - 21 = 15, \quad 3x = 36, \quad x = 12$

or $\dfrac{x-7}{1} = \dfrac{15}{3} = 5, \quad x - 7 = 5, \quad x = 12$

_____55_____ 6. 25 - 1 x 1 squares, 16 - 2 x 2, 9 - 3 x 3. 4 - 4 x 4. 1 - 5 x 5
25+16+9+4+1=55

_____15_____ 7. $14 + \cancel{b} + 25 = 20 + \cancel{b} + c, \quad c = 19$
$20 + 14 + \cancel{d} = \cancel{d} + x + 19, \quad x = 15$

a	14	20
x	b	
c	25	

_____8_____ 8. $3x - 12 - 6 + 2x = 22, \quad 5x - 18 = 22, \quad 5x = 40. \quad x = 8$

_____60°_____ 9. $36.18 - 10 = 26.18$ arc length, $\quad 10\pi = 31.42 =$ circumference,
$31.42 - 26.18 = 5.24$ missing arc, $\quad \dfrac{5.24}{31.42} = \dfrac{x}{360}, \quad x = 60°$

___$\dfrac{c\text{-}b}{a}$___ 10. $ax + b = c, \quad \dfrac{\cancel{a}x}{\cancel{a}} = \dfrac{c-b}{a}$