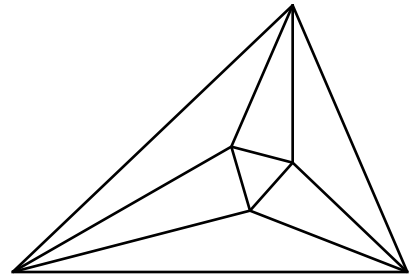


Meet 3 - Event A 2002-2003

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

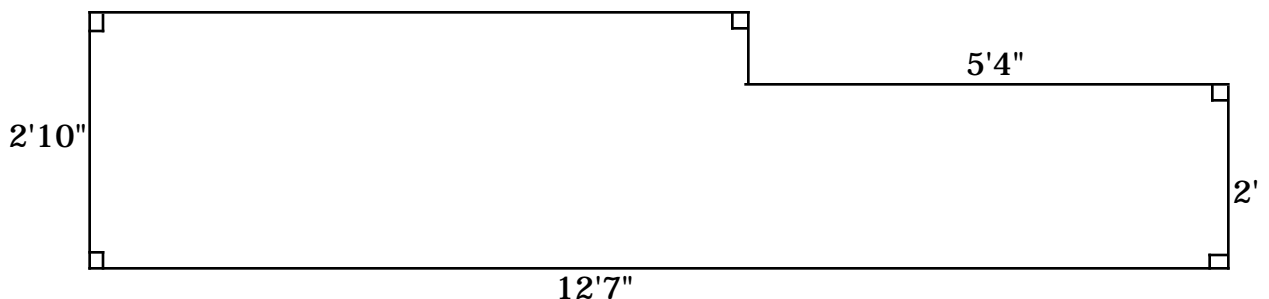


_____ 1. Solve for x : $5x = 18$.

_____ %2. On Sunday, Alicia counted 36 of the 40 campsites as being occupied. Only 4 campsites were empty. What percent of the campsites were occupied?

_____ 3. Hosea lived 25 miles from Miguel. Due to road construction, it took Hosea 50 minutes to drive to Miguel's home. What was his average speed in miles per hour?

_____ 4. Michael measured the amount of edging needed for his garden. What was the total amount he needed to buy, in feet and inches?



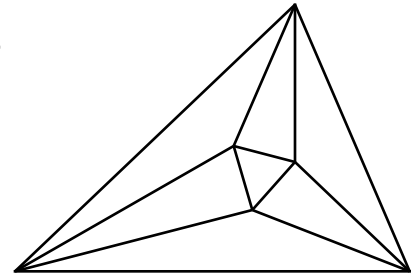
_____ 5. The circumference of the outside of a metal pipe was 3". If the metal was $\frac{1}{8}$ inch thick, what was the inside circumference of the pipe, to the nearest tenth?

Name _____ School _____

Meet 3 - Event A 2002-2003

Answers

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



3.6 or 1. $\frac{5x}{5} = \frac{18}{5}$ so $x = 3.6$
 $\frac{18}{5}$ or $3\frac{3}{5}$

90% 2. $\frac{36}{40} \times 100 = 90\%$

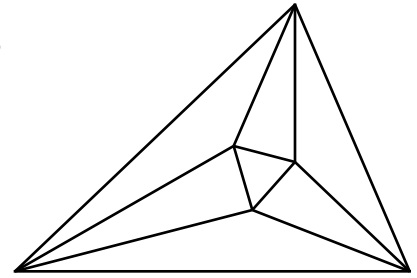
30 3. $50\text{min.} = \frac{50}{60}\text{hours, } \frac{25}{\frac{5}{6}} = 25 \times \frac{6}{5} = 30\text{mph}$

30ft. 10in. 4. $(12'7''+2'10'') \times 2 = 28'34'' = 30'10''$ or $2'10''+12'7''+2'+5'4''+10''+7'3'' = 30'10''$

2.2" 5. Outside: $2\pi r = 3$ so $r = \frac{3}{2\pi}$ Inside: $r = \frac{3}{2\pi} - \frac{1}{8} = 0.3524 \dots$
 $C = 2\pi(0.3524 \dots) = 2.21''$

Meet 3 - Event B 2002-2003

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



_____ 1. Solve for x : $3x - 4 = 5x$

_____ 2. Solve for x as a reduced fraction: $2^3 x = 3^2 \cdot 2^{-2}$

_____ 3. The scale on Margaret's map was 1 inch to 50 miles. How long was 75 miles on the map?

_____ 4. If the perimeter of a rectangle is 60 cm, and one side is 6 cm, how long is the other side?

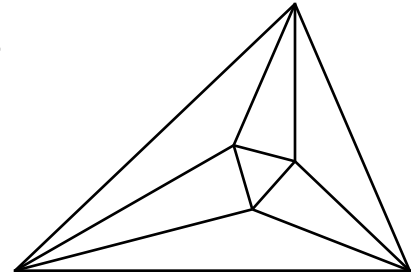
_____ 5. There were 12 people at a party: five married couples and two single people. Everyone shook hands with everyone else except the married couples did not shake hands with their spouse. How many hand shakes occurred?

Name _____ School _____

Meet 3 - Event B 2002-2003

Answers

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



$$\underline{-2} \quad 1. \quad \begin{array}{l} 3x - 4 = 5x \\ -4 = 2x \\ x = -2 \end{array}$$

$$\underline{\frac{9}{32}} \quad 2. \quad 8x = \frac{9}{4}, \quad x = \frac{9}{4 \cdot 8}$$

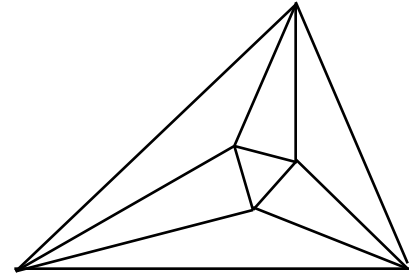
$$\underline{1.5''} \quad 3. \quad \frac{1''}{50\text{miles}} = \frac{x''}{75\text{miles}} \text{ so } x = \frac{75}{50} = 1.5$$

$$\underline{24 \text{ cm}} \quad 4. \quad \begin{array}{l} 2x + 2(6) = 60 \\ 2x = 48 \\ x = 24 \end{array}$$

$$\underline{61} \quad 5. \quad \begin{array}{l} \text{Each married person shook 10 hands. Each single person shook 11 hands.} \\ \text{One hand shake involves 2 people.} \\ \frac{10(10) + 2(11)}{2} = \frac{122}{2} = 61 \end{array}$$

Meet 3 - Event C 2002-2003

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

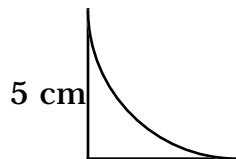


_____ 1. Solve for N : $3A = 5N + A$

_____ 2. Solve for x : $\frac{a+b}{x} = \frac{c}{b}$

_____ 3. What is 0.05% of 525?

_____ 4. A quarter circle was cut out of a square to make the shape below. If one straight edge is 5 cm, what is the perimeter of this shape, to the nearest hundredth?



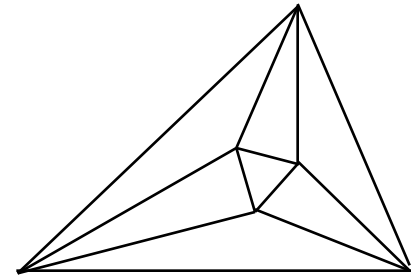
_____ 5. The circumference of the outside of a metal pipe was 3". If the metal was $\frac{1}{8}$ inch thick, what was the inside circumference of the pipe, to the nearest tenth?

Name _____ School _____

Meet 3 - Event C 2002-2003

Answers

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



$\frac{2A}{5}$ 1. $2A = 5N, \quad N = \frac{2A}{5}$

$\frac{b(a+b)}{c}$ 2. $cx = b(a+b), \quad x = \frac{b(a+b)}{c}$
or $\frac{ab+b^2}{c}$

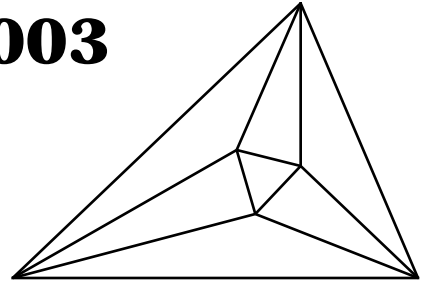
0.2625 3. $0.05\% = 0.0005, \quad 0.0005 \times 525 = 0.2625$

17.85 cm 4. circle radius = 5 cm, so $\frac{1}{4}(2\pi 5) = 7.853, \quad 5 + 5 + 7.853 = 17.85 \text{ cm}$

2.2" 5. Outside: $2\pi r = 3$ so $r = \frac{3}{2\pi}$ Inside: $r = \frac{3}{2\pi} - \frac{1}{8} = 0.3524 \dots$
 $C = 2\pi(0.3524 \dots) = 2.21"$

Meet 3 - Team Event 2002-2003

Questions are worth 4 points each.
Remember your units.

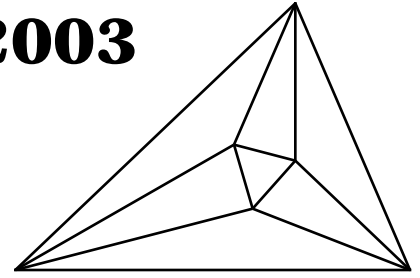


- _____ 1. When expanded as a decimal, $\frac{6}{83}$ has a long repetend (the repeating part of the decimal). What are the last two digits of the repetend?
- (_____ , _____) 2. What are the coordinates of the point two thirds of the way from (4, 8) to (-2, -4)?.
- _____ 3. Change 2.2146018366 " to the nearest $\frac{1}{16}$ of an inch.
- _____ 4. A quarter of a solid circle, $\frac{1}{4}\text{D}$, has a perimeter of 17.854 cm. Half of the same circle, $\frac{1}{2}\text{D}$, has a perimeter of 25.708 cm. What is the perimeter of three quarters of the same circle, $\frac{3}{4}\text{D}$, to three decimal places?
- _____ 5. If you reverse the last two digits in Michael's age, you get a number that is five less than half his age. How old is he?
- _____ 6. Solve for x , $\frac{1.42}{71.76} = \frac{x}{84.19}$, to two decimal places.
- _____ 7. Jerry's new stereo system had a price tag of \$229. If sales tax is 4.5%, how much did Jerry pay for the stereo system?
- _____ 8. Cheri wanted to drive the 155 miles to her summer cabin in 3 hours. If she averaged 65 mph, how long could she stop for lunch in the middle of the trip, to the nearest minute?
- _____ 9. Tom, John, and Harry are playing cards. The loser of each game splits his money evenly between the other two players. After 3 games, each player lost once. Tom has no money, John has \$4, and Harry has \$10. Who lost the first game?
- _____ % 10. 60% of 20 is what percent of 40?

School _____

Meet 3 - Team Event

2002-2003



Answers

Questions are worth 4 points each.
Remember your units.

18 1.
$$\begin{array}{r} .07KK18 \\ 83 \overline{) 6.00KK00} \\ \underline{498} \\ 1020 \\ \underline{150} \\ 83 \text{ from } 83 \times 1 \\ \underline{670} \\ 664 \text{ from } 83 \times 8 \\ \underline{6} \end{array}$$

Work backwards from a remainder of 6

(0, 0) 2. $x: -2 + \frac{1}{3}(4 - 2) = -2 + 2 = 0, \quad y = -4 + \frac{1}{3}(8 - 4) = -4 + 4 = 0$

$2\frac{3}{16}$ " 3. $\frac{3}{16} = 0.1875, \text{ so } 0.2146... - 0.1875 = 0.027, \frac{4}{16} = 0.25, \text{ so } 0.2146... - 0.25 = 0.035$
 $\therefore \frac{3}{16}$ is closer

33.562 cm 4. $25.708 - 17.854 = 7.854 \text{ cm} = \text{arc length of } 1/4 \text{ of a circle. } 25.708 + 7.854 = 33.562$

62 5. Let Michael's age be ab . $10b + a = (10a + b)/2 - 5, 20b + 2a = 10a + b - 10, 19b + 10 = 8a$
Let $b=1, 2, \text{ etc. until } 19b + 10$ is divisible by 8. $b=2, a=6$

1.67 6. $1.42 \times 84.19 \div 71.76 = 1.6659$

\$239.31 7. $\$229 + 0.045 \times \$229 = \$239.305$

37 minutes 8. $\frac{155 \text{ miles}}{65 \text{ mph}} = 2.3846 \text{ hours, } 3 - 2.3846 = 0.61538 \times 60 = 36.92$

Harry 9. Tom lost the 3rd game. John lost the 2nd game because he just received \$4 from Tom and Harry has \$4+\$6.

30% 10. $0.60 \times 20 = 12, \frac{12}{40} \times 100 = 30$