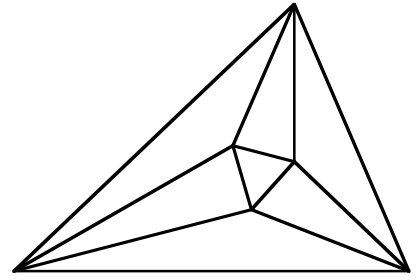


Meet 1 - Event A 2006-2007

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



_____ 1. On a fishing trip, Ken caught 9 walleyes and kept 4 of them. He caught 13 northernns and kept 3 of them. He caught 5 perch and kept all 5 of them. Walleye, northern, and perch are all kinds of fish. What fraction of the fish he kept were perch?

_____ 2. Two numbers are relatively prime if they have no factors in common, other than 1. Which trio is relatively prime?
5, 10, 15 or 5, 12, 30 or 5, 7, 35 or 5, 16, 27

_____ 3. How many pints are in 2 gallons and 1 quart and 1 cup?

_____ 4. Let a and b represent integers. Solve for x in terms of a and b .

$$\frac{x}{21} = \frac{a}{3} - \frac{b}{7}$$

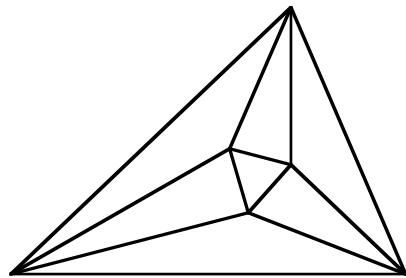
_____ 5. Find the improper fraction for:

$$2 + \frac{1}{3 - \frac{1}{4 + \frac{1}{5}}}$$

Meet 1 - Event A 2006-2007

Answers

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



$$\underline{\frac{5}{12}} \quad 1. \quad 4 \text{ walleye} + 3 \text{ northern} + 5 \text{ perch} = 12 \text{ fish kept}$$

$$\underline{5, 16, 27} \quad 2. \quad 5, 10, 25 \text{ have } 5 \text{ as a common factor, } 12 \text{ and } 30 \text{ have } 3 \text{ in common, } 35 \text{ has both } 5 \text{ and } 7, \text{ but } 5, 16, 27 \text{ have no common factors.}$$

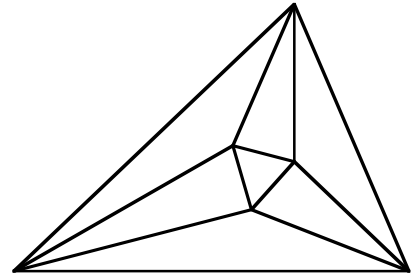
$$\begin{array}{l} \underline{18.5} \\ \text{or } 18\frac{1}{2} \end{array} \quad 3. \quad \begin{array}{l} 2 \text{ gal} = 16 \text{ pints} \\ 1 \text{ qt} = 2 \text{ pints} \\ 1 \text{ cup} = 0.5 \text{ pints} \end{array}$$

$$\underline{x = 7a - 3b} \quad 4. \quad \frac{x}{21} = \frac{7a}{7 \cdot 3} - \frac{3b}{3 \cdot 7} = \frac{7a - 3b}{21}$$

$$\underline{\frac{137}{58}} \quad 5. \quad 2 + \frac{1}{3 - \frac{1}{4 + \frac{1}{5}}} = 2 + \frac{1}{3 - \frac{1}{21}} = 2 + \frac{1}{3 - \frac{5}{21}} = 2 + \frac{1}{\frac{58}{21}} = 2 + \frac{21}{58} = \frac{137}{58}$$

Meet 1 - Event B 2006-2007

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



_____ 1. If there are 39.37 inches in one meter, how many centimeters are there in 78.74 inches?

_____ 2. Round 4271.8195 to two significant figures.

_____ 3. $18n5n47$ is divisible by 9. Find n .

_____ 4. The sum of four consecutive numbers is 3558. What is the largest of these four numbers?

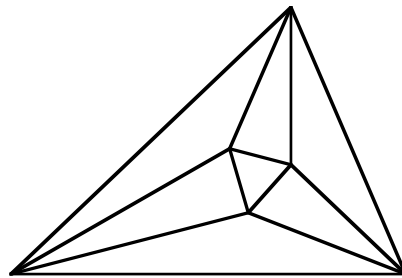
_____ 5. Find the value of $a+b$ if $a, b < 0$ and $\frac{5}{7} \times \frac{a}{b} \div \frac{1}{2} = \frac{10}{21}$.

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Meet 1 - Event B 2006-2007

Answers

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



200 1. $\frac{39.37 \text{ in}}{100 \text{ cm}} = \frac{78.74 \text{ in}}{x}, \quad x = \frac{100 \times 78.74}{39.37} = 200 \text{ cm}$

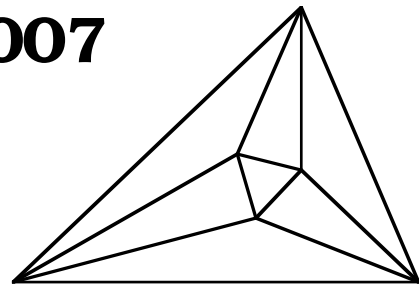
4300 2.

1 3. The sum of the digits must be divisible by 9. $1 + 8 + 5 + 4 + 7 = 25$.
 $25 + 2 = 27$ so $n=1$ is a possible answer. $25 + 11 = 36$ won't work.
 $25 + 20 = 45$ yields $n=10$, which is too big.

891 4. $4\overline{)3558} = 889.5$ so try numbers on either side. $888 + 889 + 890 + 891 = 3558$

-4 5. $\frac{5}{7} \times \frac{a}{b} \div \frac{1}{2} = \frac{5}{7} \times \frac{a}{b} \times 2 = \frac{10}{21}, \quad \frac{10}{7} \times \frac{a}{b} = \frac{10}{21}, \quad \frac{a}{b} = \frac{\overset{1}{\cancel{10}}}{\underset{3}{\cancel{21}}} \times \frac{\overset{1}{\cancel{7}}}{\underset{1}{\cancel{10}}} = \frac{1}{3} = \frac{-1}{-3}, \quad -1 + -3 = -4$

Meet 1 - Team Event 2006-2007



Questions are worth 4 points each.
Remember your units.

- _____ 1. If a number equals nine times the sum of its digits, $N=9d$, what is the largest number guaranteed to be a divisor of N ?
- _____ 2. Factor 17640 into primes to the appropriate power.
- _____ 3. There are four pairs of numbers that have a Greatest Common Factor of 6 and a Least Common Multiple of 630. Find all four pairs.

- _____ 4. Mia bought four tops for \$8.99 each, two fleece shirts at \$17.99 each, one sweater at \$18.99, and two pairs of jeans at \$26.99 each. She handed the clerk \$150. What was her change back?
- _____ 5. Solve for x if $5 = \frac{x+3}{6}$.
- _____ yd 6. Marlys' quilt was to be made from $7 \frac{1}{2}$ inch squares. There were 126 squares total. 63 in blue fabric and 63 in yellow fabric. A bolt of fabric is 44 inches wide. What length of blue fabric is needed, rounding up to the nearest $\frac{1}{8}$ of a yard.
- _____ 7. $1579ab$ is a number divisible by 9 and by 4. What are the two possible values for ab ?
- _____ 8. Moua bought six tomato plants in the spring for \$9.32. In August she sold an average of 20 tomatoes from each plant for \$0.75 each. What was her profit?
- _____ 9. Four girls took a 100 point test. Janice's score was 20 more than Betty's score. Mary's score of 60 was $\frac{2}{3}$ of Janice's score. Betty's score was $\frac{7}{8}$ of Sharon's score. What was Sharon's score?
- _____ 10. Solve for x : $\frac{17}{3} = 5 + \frac{1}{x + \frac{1}{2}}$.

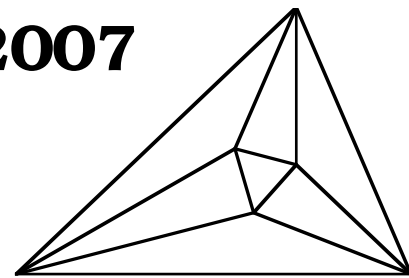
Meet 1 - Team Event

2006-2007

Answers

Questions are worth 4 points each.

Remember your units.



81 1. If $N=9d$, N is divisible by 9, so the sum of its digits is also divisible by 9, so $N=9(9t)$ or $N=81t$. If $t=1$, $81=9(8+1)$ which is true, so 81 is the largest guaranteed divisor.

$2^3 \cdot 3^2 \cdot 5 \cdot 7^2$ 2. $17640 = 2 \cdot 2 \cdot 2 \cdot 3 \cdot 3 \cdot 5 \cdot 7 \cdot 7$

<u>6, 630</u>	3.	GCF=6	LCM=6•3•5•7		
<u>18, 210</u>		6•3 = 18	6•5 = 30	6•7 = 42	
<u>20, 126</u>		6•5•7 = 210	6•3•7 = 126	6•3•5 = 90	
<u>42, 90</u>					

(1 point each correct pair)

\$5.09 4. $4 \times 8.99 + 2 \times 17.99 + 18.99 + 2 \times 26.99 = 144.91$, $\$150 - \$144.91 = \$5.09$
(\$ required)

27 5. $30 = x + 3$, $x = 27$

$2\frac{3}{4}$ yd 6. $44" / 7.5" = 5.86$ or 5 squares in each $7\frac{1}{2}"$ wide stripe across the fabric.
 $63 / 5 = 12.6$ or 13 rows needed. $13 \times 7.5" = 97.5$ inches needed.
 $97.5" / 36" = 2.7$ yds or $2\frac{3}{4}$ yd. (A quilter would buy 3 yards to allow for mistakes in cutting the fabric, but would only need $2\frac{3}{4}$ yd if all the cutting was perfect.)

32 or 68 7. $1 + 5 + 7 + 9 + a + b = 22 + a + b$ so $a + b = 5$ or 14
 ab must be divisible by 4, so $a = 3$, $b = 2$ or $a = 6$, $b = 8$

\$80.68 8. $6 \times 20 = 120$ tomatoes, $120 \times 0.75 = \$90$, $\$90 - \$9.32 = \$80.68$
(\$ required)

80 9. $60 = \frac{2}{3}J$, $J = 60 \times \frac{3}{2} = 90$, $B = 90 - 20 = 70$, $70 = \frac{7}{8}S$, $S = 70 \times \frac{8}{7} = 80$

1 10. $\frac{17}{3} = 5 + \frac{2}{3} = 5 + \frac{1}{\frac{3}{2}} = 5 + \frac{1}{1 + \frac{1}{2}}$, $x = 1$