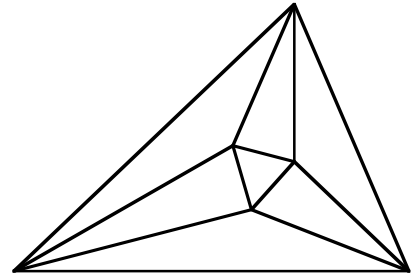


Meet 1 - Event A 2007-2008

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



_____ 1. What is the smallest number divisible by both 8 and 10?

_____ 2. Which fraction is a ratio of relatively prime numbers?

$$\frac{15}{60}, \frac{9}{25}, \frac{8}{144}, \text{ or } \frac{49}{14}$$

_____ 3. What is the smallest integer, n , such that $|n|$ is a perfect cube?

_____, _____ 4. Find two pairs of integers that have a Greatest Common Factor of 18 and a Least Common Multiple of 900.

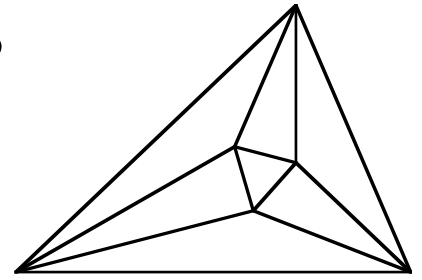
_____ 5. Write as one fraction in reduced form:

$$\frac{x}{3} + \frac{2}{5} = ?$$

Meet 1 - Event A 2007-2008

Answers

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



40 1. $8 = 2 \cdot 2 \cdot 2$, $10 = 2 \cdot 5$, $GCM = 2 \cdot 2 \cdot 2 \cdot 5 = 40$

$\frac{9}{25}$ 2. 15 and 60 have 15 in common, 8 and 144 have 8 in common, 49 and 14 have 7 in common.

33 3. $11^3 = 1331$ Digit and integer are not the same.

18, 900 4. $GCF=18$, $18 \cdot 2=36$, $18 \cdot 25=450$, $LCM=18 \cdot 2 \cdot 5 \cdot 5$
Don't forget the obvious 18 and 900.

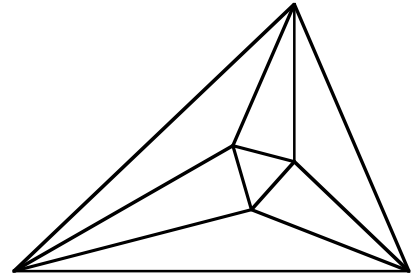
36, 450

Must have both answers

$\frac{5x+6}{15}$ 5. $\frac{5x}{15} + \frac{6}{15} = \frac{5x+6}{15}$

Meet 1 - Event B 2007-2008

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



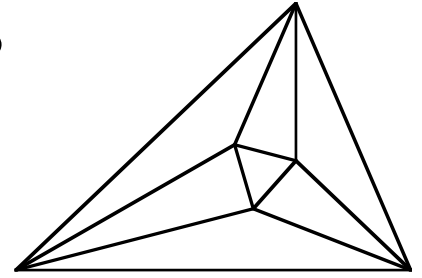
- _____ in.1. Nancy had a ruler marked off in tenths of an inch. Using her ruler, how long would $2\frac{3}{16}$ inches be to the nearest mark on her ruler?
- _____ 2. What fraction of an hour is 2000 seconds?
- _____ 3. If the Least Common Multiple of n and 21 is 105, what is the smallest possible value of n ?
- _____ 4. Sandy left home at 8:15 AM on Monday and got back home at 4:40 PM on Wednesday. How long was she gone in hours and minutes?
- _____ 5. $d2d1003d$ is divisible by 18. Find the digit d .

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Meet 1 - Event B 2007-2008

Answers

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



2.2 in. 1. $\frac{3}{16} = 0.1875 = 0.2$ to the nearest tenth, so 2.2 inches is correct

$\frac{5}{9}$ 2. 1 hour = 3600 seconds $\frac{2000}{3600} = \frac{5}{9}$

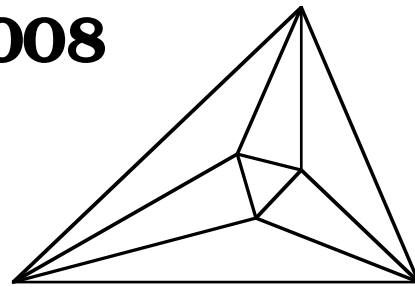
5 3. $105 = 3 \cdot 5 \cdot 7$, $21 = 3 \cdot 7$, $n = 5$

56:25 4. Monday: $24:00 - 8:15 = 23:60 - 8:15 = 15:45$
Tuesday: 24:00 Wednesday: $4:40 = 16:40$
 $15:45 + 24:00 + 16:40 = 55:85 = 56:25$

4 5. $d + 2 + d + 1 + 3 + d = 3d + 6$ is divisible by 9
If $d = 1: 3 + 6 = 9$ $d = 4: 12 + 6 = 18$ $d = 7: 21 + 6 = 27$
But $18 = 9 \times 2$ so d is an even number

Meet 1 - Team Event 2007-2008

Questions are worth 4 points each.
Remember your units.



_____ 1. Determine the digit n .
$$\begin{array}{r} 324 \overline{)1542a} \\ \underline{1296} \\ 246a \\ \underline{2268} \\ 192 \end{array}$$

_____ 2. If $x + y + 14 = 26$ and $10 + y + 3 = 17$, what is x ?

_____ 3. Factor 79560 into primes to the appropriate power.

_____ 4. A cube 12.5 feet on each edge is made up of cubes 1 inch on each edge. What is the volume of the large cube measured by the number of small cubes it contains?

_____ 5. What is the angle between the hands of a clock at 1:30 AM?

_____ 6. What is two fifths of two and one half?

_____ 7. Simplify to one improper fraction in lowest terms:
$$2 + \frac{3 + \frac{7}{9}}{5 + \frac{2}{3}}$$

_____ 8. Solve for x if:
$$\frac{x}{5} + \frac{2x}{8} + \frac{3x}{20} = \frac{24}{40}$$

_____ 9. Quaid bought two pair of jeans for \$35, four shirts for \$60, 6 pair of socks for \$10, and one pair of shoes for \$45. What was the cost of his outfit on the first day of school?

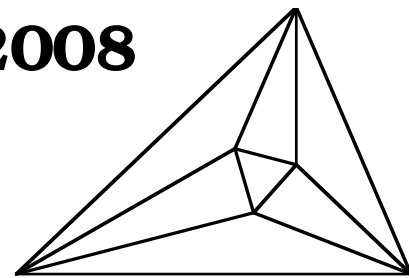
_____ 10. Quaid had saved up \$140 for new clothes for school. How much did his father have to add to Quaid's money for him to buy the items in question 9?

Meet 1 - Team Event

2007-2008

Answers

Questions are worth 4 points each.
Remember your units.



7 1. $a=0$ since $10-8=2$, so $15420 / 324 = 47.\overline{592}$ or $2268/324=7$
Good math students understand long division.

8 2. $10 + y + 3 = 17$, $y + 13 = 17$, $y = 4$, $x + 4 + 14 = 26$, $x + 18 = 26$, $x = 8$

$2^3 \cdot 3^2 \cdot 5 \cdot 13 \cdot 17$ 3. $79560 = 2^3 \cdot 3^2 \cdot 5 \cdot 13 \cdot 17$

3375000 cubes 4. $12.5\text{ft}=144+6\text{inches}=150\text{inches}$, $150 \times 150 \times 150=3375000$ cubes
or 3375000 in^3

135° 5. At 1:30 the hour hand is half way between 1 and 2 and the minute hand is on 6. There are 30° between numbers on a clock, so $15^\circ + 4(30^\circ) = 135^\circ$

1 6. $\frac{2}{5} \times 2\frac{1}{2} = \frac{2}{5} \times \frac{5}{2} = 1$

$\frac{8}{3}$ 7. $2 + \frac{34}{17} = 2 + \frac{\cancel{2}^2 \cancel{34}^3}{\cancel{3}^3 \cancel{17}^1} = \frac{8}{3}$ or $2 + (3 + 7/9) / (5 + 2/3) = 2.\overline{6} = 8/3$

1 8. $\frac{8x}{40} + \frac{10x}{40} + \frac{6x}{40} = \frac{24x}{40} = \frac{24}{40}$ so $x=1$

\$79.17 9. 1 pair of jeans=\$17.50, 1 shirt=\$15, 1 pair of socks=\$1.67, 1 pair of shoes=\$45. $17.50+15+1.67+45=\$79.17$
(\$ required)

\$10 10. $36+60+10+45=150$, $150-140=\$10$
(\$ required)