

MEET 1 PYTHAGOREAN DIVISION NOVEMBER 7, 2002 SOLUTIONS GRADE 9

The answer to each question is in parentheses at the beginning of each solution.

1) (d or $\frac{a}{3}$) $a \Delta a = \frac{a^2}{2a} = \frac{a}{2} \cdot a \Delta \frac{a}{2} = \frac{a^2}{2} \div \frac{3a}{2} = \frac{a}{3}.$

2) (b or 47) $dR(50) = 5, dR(47) = 2, dR(22) = 4, dR(39) = 3, dR(85) = 4.$ ($dR(85) = 8 + 5 = 13, 1 + 3 = 4.$)

3) (2) $\frac{1}{4} + \frac{1}{5} + \frac{1}{20} = \frac{1}{2} \cdot a^* = \frac{1}{2}; a = 2.$

4) (7 & 10) $(x - 9)^{x-7}$ will equal 1 if $x - 7 = 0$ or if $x - 9 = 1$. Thus $x = 7$ or $x = 10$. (If $x = 8$, $(-1)^1 \neq 1.$)

5) (48) Let $x =$ number of ft. underground. $x + 12 + 5x + 3 = 69.$ $6x = 54; x = 9.$
 $5(9) + 3 = 48$ ft.

6) (11) Marla ran 100 yards for every 95 yards Lynn ran or Marla ran 20 yards for every 19 Lynn ran. $220 \div 20 = 11.$ While Marla ran 20 yards 11 times, Lynn ran 19 yards 11 times. $19 \times 11 = 209.$ $220 - 209 = 11$ yards ahead.