

Left

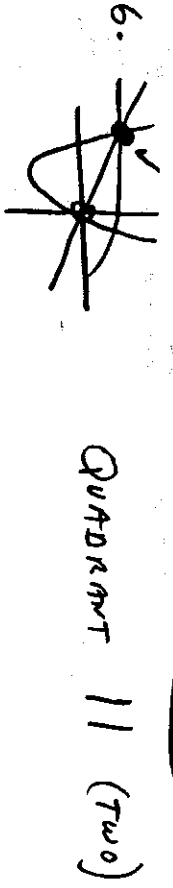
1.  $4A+15=43$   $4B+12=40$   $-3C+63=42$   $11D-31=46$   $A+B+C+D$   
 $4A=28$   $4B=28$   $-3C=-21$   $11D=77$   $7+7+7+9$   
 $A=7$   $B=7$   $C=7$   $D=7$   $(A,B)$

2.  $\beta_1 = x$   $\beta_2 = x+2$   $\beta_3 = x+4$   $7.321M - 51,637 = 36,215$   
 $x(x+4) = 4(x+2) + 1$   $7.321M = 87,852$   $M = 12$   
 $x^2 + 4x = 4x + 8 + 1$   $7.321M = 15,422$   $M \approx 2,106542...$   
 $x^2 - 9 = 0$   $7.321M - 51,637 = -36,215$   
 $(x+3)(x-3) = 0$   $7.321M = 15,422$   $M = 12$   
 $x = -3, 3$

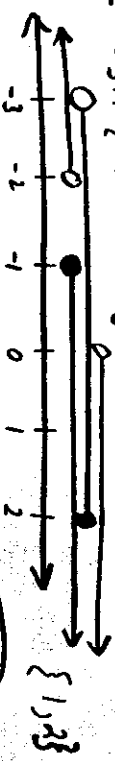
3.  $A = \frac{(x-7)(x-6)}{(x-7)(x+4)} \cdot \frac{(x-5)(x+4)}{(x-6)(x+5)} \cdot \frac{x+5}{1} = x-5$   
 $B = \frac{(x-4)(x-3)}{(x+3)(x-1)} \cdot \frac{(x+3)(x-1)}{(x-4)(x-2)} \cdot \frac{x-2}{1} = x-3$   
 $C = \frac{6x+12}{x+2} = \frac{6(x+2)}{x+2} = 6$   
 $D = \frac{x^2+5x-x^2+2x-3x-x^2}{x-y} = \frac{-x^2+4x}{x-y} = \frac{-x(x-4)}{x-y} = -x$

4.  $\epsilon: \frac{8.792 \times 3.214}{6.28} \times 10^9 \approx 4.528 \times 10^9$   $\epsilon = 4$   $(\frac{2}{5})^p = \frac{25}{4} = (\frac{2}{5})^{-2}$   
 $M = \frac{3-3}{-1-2} = \frac{0}{-9} = 0$   $-EM P = -(4)(-2)(0) = 0$   $P = -2$

5.  $1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610, 987$   
 $1597, 2584, 4181, 144+233+...+4181 = 10713$   
 $144+4181 = 4325$



7.  $\{8-6x-5 < 2x-4+7\} \cap \{1 < 2x+7 \leq 11\} \cap \{3x+1 < -5 \text{ or } 5x-3 \geq -8\}$   
 $\{-8x < 0\} \cap \{-6 < 2x \leq 4\} \cap \{3x < -6 \text{ or } 5x \geq -5\}$   
 $\{x > 0\} \cap \{-3 < x \leq 2\} \cap \{x < -2 \text{ or } x \geq -1\}$



8.  $A = 10 - (10-1) + (10^2+1) = 102$   
 $B = 5 \cdot 2 + (5 \cdot 2)^2 + 5 + 2 = 117$   
 $C = (4-1)^2 + (4+6)^2 = 109$   
 $D = (10-2)^2 + 2(2+10) - 16 = 72$   
 $Sum = 400$

GAOIDS

9.  $3A+4 - \{-2-[-3-(A-1)]\} = 2A+4$   
 $2A+2 - \{-3-[-2-(3-A)]\} = 3A+4$   
 $\{A-[A+(3-A)] - (A+1)\} + 5A = 5A-4$   
 $A - \{3A - [3A - (4A-5A) - 6A] - 7A\} - 8A = -4A$   
 $Sum = 6A+4$

6 TRUES

12.  $A = 3+6-(-8) = 17$   $(-A, B)^c$   
 $B \Rightarrow 3B - (-8) = 17$   $(-17, 3)^c$   
 $3B = 9$   $B = 3$   
 $C \Rightarrow (x-A)(x-B) \dots (x-x)(x-y)(x-z)$   
 $C = 0$   $x-x = 0$

1

13.  $A = -3 - 25 - 1 - 1 + 25 = -5$

$B = 5 + 6 - 18x + 15x - 12 + 3x - 7 = -8$

$C = 16 + 64 + \frac{26}{13} - 10 = 72$

$\frac{(-5)(72)}{-8} = 45$

14.  $L = 2x$   
 $w = x$

$U = x$   
 $D = 63 - x$

PARENT Age  
 $T = x$   
 $C = 30 - x$

Age  
 $X = x - 5$   
 $25 - x$

$2L + 2w = P$   
 $4x + 2x = 30$   
 $6x = 30$

$5x + 10(63 - x) = 505$   
 $5x + 630 - 10x = 505$   
 $-5x = -125$

$25 - x = 3(x - 5)$   
 $25 - x = 3x - 15$   
 $40 = 4x$

$w = x = 5$   
 $L = 2x = 10$

$U = x = 25$   
 $D = 63 - x = 38$

$T = x = 10$   
 $C = 30 - x = 20$

$10 + 38 + 20 = 68$

ADDITION

MULTIPLICATION

15. ODDS  $7 + 3 = 10$  NO

EVEN  $4 + 6 = 10$  YES

$7 + 3 = 21$  YES

$4 + 6 = 24$  YES

$\{-1, 0, 1\}$   $1 + 1 = 2$  NO

YES

4 yes answer