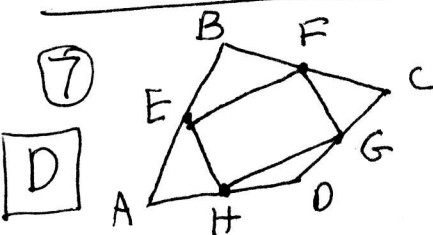


5) FOR A POINT  $(a, b)$  WITH  $a * b \neq 0$  VISIBLE IS EQUIVALENT TO  $GCF(a, b) = 1$ ,  $GCF(28, 15) = 1$  ANS B, ALL OTHERS  $GCF > 1$

6)	JUMP NUMBER	START	1	2	3	4	5	6	7	8	9	10	11	12
	JUMP AMOUNT		1	2	3	2	1	2	3	2	1	2	3	2
	POSITION	12	1	3	6	8	9	11	2	4	5	7	10	12

7) RETURN TO STARTING POSITION AFTER 12 JUMPS

$2008 = 12 * 167 + 4$  SO AFTER 2008 JUMPS THE FLEA IS AT THE SAME POSITION AS AFTER 4 JUMPS ON THE 8, ANS. E



EFGH IS CALLED THE MIDQUAD AND IS A PARALLELOGRAM SO OPPOSITE ANGLES ARE CONGRUENT AND ADJACENT ANGLES ARE SUPPLEMENTARY

RESPONSE A B C D E  
 TRUE OR NOT ALWAYS TRUE TRUE NOT ALWAYS TRUE TRUE NOT ALWAYS

8)	$\{2, 4, 5, 7\}$	SUBSETS POSSIBLE SUMS	1 ELEMENT	2 EL.	3 EL.	ALL 4
			2	6	11	18
			4	7	13	
			5	9	14	
			7	9	16	
				11		
				12		

DISTINCT SUMS ARE CIRCLED ONLY ONCE  
 12 DISTINCT SUMS ANS C

9)  $ax - b = c$ ,  $bx - c = a$   $a, b, c$  DISTINCT NONZERO  
 SO  $x = \frac{b+c}{a} = \frac{a+c}{b}$  SO  $b(b+c) = a(a+c)$  ADD  $ab$  TO BOTH SIDES  
 $b(a+b+c) = a(a+b+c)$   
 BUT  $a \neq b$  (DISTINCT) SO  $a+b+c = 0$  ANS A  
 (ALL OTHER RESPONSES VIOLATE EITHER THE DISTINCT OR NONZERO CONDITION)

10)  $\frac{x^2 - 22x + 40}{x^2 + 13x - 30} = \frac{(x-2)(x-20)}{(x-2)(x+15)} = \frac{x-20}{x+15}$  IF  $x \neq 2$   
 2 ASYMPTOTES : H.A.:  $y = 1$ , V.A.:  $x = -15$   
 ANS. C  
 REMOVABLE DISCONTINUITY AT  $x = 2$  NOT AN ASYMPTOTE