Ong Ci Hui Minh Ngoc P4

Kong Hwa School, Singapore

∞ Brush loads ♡

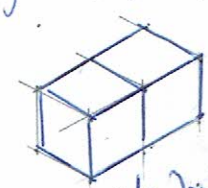
1

A - arrangement

2

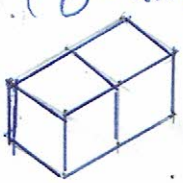
A - arrangement

1×2+1=3



1×2+2=4

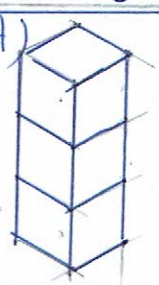
(B - arrangement)



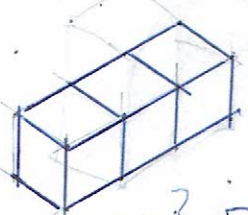
1×2+2=4

3

(A)



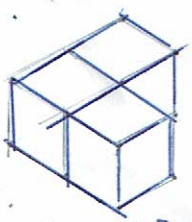
2×2+1=5



2×2+3=7

2×2+2=6

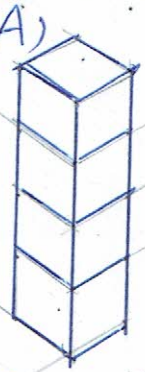
(C)



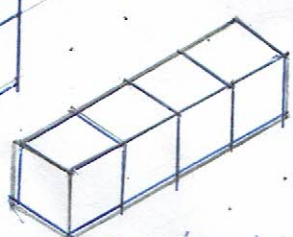
2×2+3=7

4

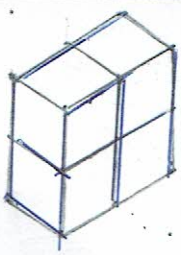
(A)



3×2+1=7

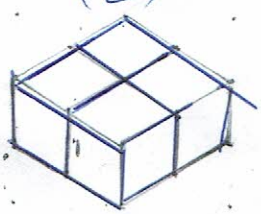


3×2+4=10



4×2+2=10

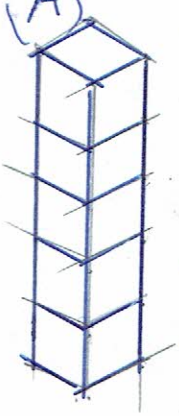
(C)



4×2+4=12

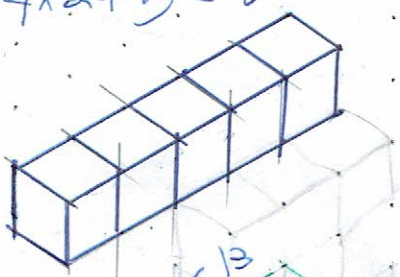
5

(A)

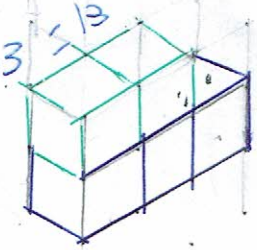


4×2+1=9

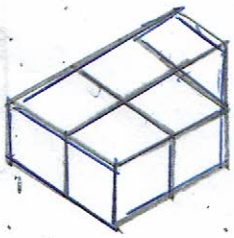
4×2+5=13



5×2+3=13



(Z)



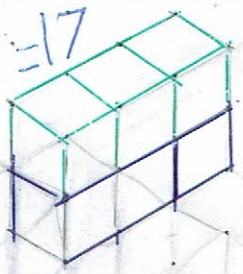
5×2+5=15

6

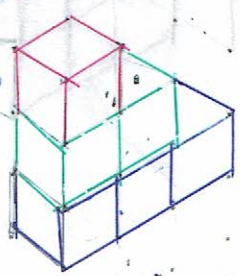
(A)

5×2+1=11

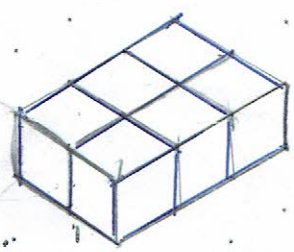
7×2+3=17



6×2+3=15



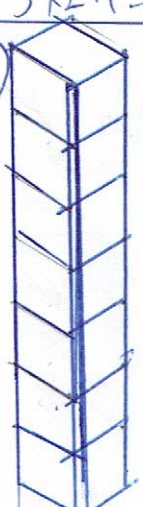
(Z)



7×2+6=20

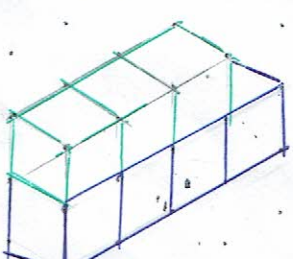
7

(A)

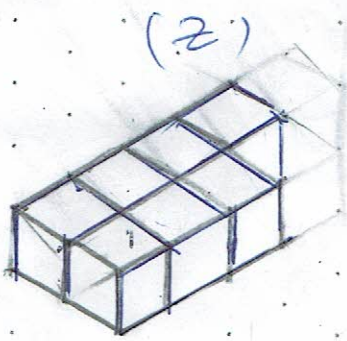


6×2+1=13

8×2+4=20



(Z)



8×2+7=23

♡ Brush Loads ♡

no of cubes	Total no. of faces not covered	Arrangement A total faces covered	Brush Loads A	Arrangement Z total faces covered	Brush Loads Z
1	1x6=6	1	6-1=5	1	6-1=5
2	2x6=12	1x2+1=3	12-3=9	1x2+2=4	12-4=8
3	3x6=18	2x2+1=5	18-5=13	2x2+3=7	18-7=11
4	4x6=24	3x2+1=7	24-7=17	4x2+4=12	24-12=12
5	5x6=30	4x2+1=9	30-9=21	5x2+5=15	30-15=15
6	6x6=36	5x2+1=11	36-11=25	7x2+6=20	36-20=16
7	7x6=42	6x2+1=13	42-13=29	8x2+7=23	42-23=19
⋮	⋮	⋮	⋮	⋮	⋮
n	nx6=6n	(n-1)x2+1			

Comments:
Arrangement A has the least no. of faces covered.
Arrangement Z has the most no. of faces covered
Brush loads = total cube faces − total no. of covered faces
∴ Arrangement A has the most brush loads possible, while Arrangement Z has the least no. of brush loads possible. All other arrangements give the brush load between both arrangements