



② let  $a$  be any positive integer and  $b = 6$ .  
By using euclid's div. lemma

$a = 6q + r$  where  $q$  and  $r$  are some integers,  $0 \leq r < 6$

Possible values of  $r$  are  $0, 1, 2, 3, 4, 5$

if $r = 0$ $a = 6q$ even $\therefore 6q$ is div by 2	if $r = 1$ $a = 6q + 1$ odd	if $r = 2$ $a = 6q + 2$ even	if $r = 3$ $a = 6q + 3$ odd	if $r = 4$ $a = 6q + 4$ even	if $r = 5$ $a = 6q + 5$ odd
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$\therefore$  any positive odd integer is of the form  $6q + 1, 6q + 3, 6q + 5$

③ By given conditions, maximum no. of columns = HCF of 616 and 32  
 $= 8$

$$\begin{array}{r} 19 \\ 32 \overline{) 616} \\ \underline{32} \\ 296 \\ \underline{288} \\ 8 \end{array} \quad \begin{array}{r} 4 \\ 8 \overline{) 32} \\ \underline{32} \\ 0 \end{array}$$