

Page 146. Q3

$$\text{Q3(a)} \quad 14 \text{ rows of } \boxed{16} = 224$$

$$\text{(b)} \quad 17 \text{ rows of } 13 \\ 17 \times 13 = 221$$

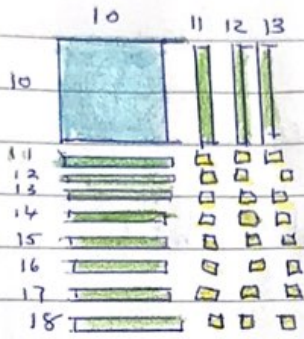
$$\text{(c)} \quad 12 \times 21 = 252$$

$$\text{(d)} \quad 13 \times 18 = 234$$

$$\text{(e)} \quad 16 \times 15 = 240$$

$$\text{(f)} \quad 13 \times 23 = 299$$

Blue block is equal to 100  
Green strip = 10  
yellow cubes = 1



$18 \times 13 = 234$

(g)

$$\begin{array}{r} \text{T U} \\ 18 \\ \times 13 \\ \hline 54 \\ + 180 \\ \hline 234 \end{array}$$

or

(b)

$$\begin{array}{r} \text{T U} \\ 22 \\ \times 16 \\ \hline 132 \\ + 220 \\ \hline 352 \end{array}$$

(f)

$$\begin{array}{r} \text{T U} \\ 22 \\ \times 21 \\ \hline 22 \\ + 440 \\ \hline 462 \end{array}$$

(g)

$$\begin{array}{r} \text{T U} \\ 12 \\ \times 19 \\ \hline 108 \\ + 120 \\ \hline 228 \end{array}$$

(c)

$$\begin{array}{r} \text{T U} \\ 26 \\ \times 12 \\ \hline 52 \\ + 260 \\ \hline 312 \end{array}$$

(h)

$$\begin{array}{r} \text{T U} \\ 24 \\ \times 14 \\ \hline 96 \\ + 240 \\ \hline 336 \end{array}$$

(i)

$$\begin{array}{r} \text{T U} \\ 24 \\ \times 26 \\ \hline 144 \\ + 480 \\ \hline 624 \end{array}$$

(d)

$$\begin{array}{r} \text{T U} \\ 14 \\ \times 13 \\ \hline 42 \\ + 140 \\ \hline 182 \end{array}$$

(j)

$$\begin{array}{r} \text{T U} \\ 21 \\ \times 15 \\ \hline 105 \\ + 210 \\ \hline 315 \end{array}$$

(k)

$$\begin{array}{r} \text{T U} \\ 23 \\ \times 127 \\ \hline 161 \\ + 230 \\ \hline 391 \end{array}$$

(e)

$$\begin{array}{r} \text{T U} \\ 25 \\ \times 13 \\ \hline 75 \\ * 250 \\ \hline 325 \end{array}$$

(l)

$$\begin{array}{r} \text{T U} \\ 25 \\ \times 26 \\ \hline 150 \\ + 500 \\ \hline 650 \end{array}$$

$$\begin{array}{r}
 \text{(a)} \quad \begin{array}{r} T \quad U \\ 1 \quad 9 \\ \times \quad 1 \quad 1 \\ \hline 1 \quad 9 \\ + 1, 9 \quad 0 \\ \hline 2 \quad 0 \quad 9 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{(b)} \quad \begin{array}{r} T \quad U \\ 1 \quad 8 \\ \times \quad 1 \quad 2 \\ \hline 3 \quad 6 \\ + 1, 8 \quad 0 \\ \hline 2 \quad 1 \quad 6 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{(c)} \quad \begin{array}{r} 2 \quad 1 \\ \times \quad 1 \quad 4 \\ \hline 8 \quad 4 \\ + 2 \quad 1 \quad 0 \\ \hline 2 \quad 9 \quad 4 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{(d)} \quad \begin{array}{r} 1 \quad 3 \\ \times \quad 1 \quad 6 \\ \hline 7 \quad 8 \\ + 1, 3 \quad 0 \\ \hline 2 \quad 0 \quad 8 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{(e)} \quad \begin{array}{r} T \quad U \\ 2 \quad 0 \\ \times \quad 1 \quad 1 \\ \hline 2 \quad 0 \\ + 2 \quad 0 \quad 0 \\ \hline 2 \quad 2 \quad 0 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{(f)} \quad \begin{array}{r} T \quad U \\ 1 \quad 3 \\ \times \quad 2 \quad 2 \\ \hline 2 \quad 6 \\ + 2 \quad 6 \quad 0 \\ \hline 2 \quad 8 \quad 6 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{(g)} \quad \begin{array}{r} T \quad U \\ 1 \quad 2 \\ \times \quad 1 \quad 7 \\ \hline 8 \quad 4 \\ + 1, 2 \quad 0 \\ \hline 2 \quad 0 \quad 4 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{(h)} \quad \begin{array}{r} T \quad U \\ 2 \quad 1 \\ \times \quad 1 \quad 2 \\ \hline 4 \quad 2 \\ + 2 \quad 1 \quad 0 \\ \hline 2 \quad 5 \quad 2 \end{array}
 \end{array}$$



$$\begin{array}{r}
 \text{(i)} \quad \begin{array}{r} \text{T U} \\ 12 \\ \times 24 \\ \hline 48 \\ + 240 \\ \hline 288 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{(j)} \quad \begin{array}{r} \text{T U} \\ 14 \\ \times 15 \\ \hline 70 \\ + 140 \\ \hline 210 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{(k)} \quad \begin{array}{r} \text{T U} \\ 23 \\ \times 13 \\ \hline 69 \\ + 230 \\ \hline 299 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{(l)} \quad \begin{array}{r} \text{T U} \\ 22 \\ \times 15 \\ \hline 110 \\ + 220 \\ \hline 330 \end{array}
 \end{array}$$

(j)  $14 \times 15$   
est.  $10 \times 20 = 200$

(k)  $23 \times 13$   
est.  $20 \times 10 = 200$

(l)  $22 \times 15$   $20 \times 10 = 200$   
 $20 \times 20 = 400$

When estimating  
Remember:  
To multiply a number  
by 10 just add a zero.

e.g. (a)  $19 \times 11$   
estimate  $20 \times 10$   
 $20 \text{ (add zero)} = 200$

(b)  $18 \times 12$   
est.  $20 \times 10$   
 $20 \text{ add zero} = 200$

(c)  $21 \times 14$   
est.  $20 \times 10 = 200$

(d)  $13 \times 16$  same as  
est.  $10 \times 20 = 20 \times 10$   
 $= 200$

(e)  $20 \times 11$   
est.  $20 \times 10 = 200$

(f)  $13 \times 22$   
est.  $10 \times 20 = 20 \times 10 = 200$

(g)  $12 \times 17$   
est.  $10 \times 20 = 200$

(h)  $21 \times 12$   
est.  $20 \times 10 = 200$

(i)  $12 \times 24$   
est.  $10 \times 20 = 200$