

p84 Multiplication:

It doesn't matter where the brackets go in this Q.

$$Q3. (9 \times 2) \times 5 = 90$$

$$b (8 \times 3) \times 6 = 144$$

$$c 5 \times (6 \times 7) = 210$$

$$d (7 \times 8) \times 2 = 112$$

$$e 9 \times (4 \times 3) = 108$$

$$f (8 \times 6) \times 5 = 240$$

$$g (5 \times 9) \times 3 = 135$$

$$h 6 \times (9 \times 7) = 378$$

$$i 7 \times (8 \times 9) = 504$$

Q4. see photo.

- 4.
- (a) $9 \times 4 = (3 \times 4) + (6 \times 4)$
- (c) $15 \times 9 = (8 \times 9) + (7 \times 9)$
- (e) $(4 \times 7) + (5 \times 7) = 9 \times 7$
- (g) $(8 \times 6) + (4 \times 6) = 12 \times 6$
- (i) $(17 \times 6) + (17 \times 4) = 17 \times 10$
- (k) $(34 \times 9) + (34 \times 1) = 34 \times 10$
- (b) $12 \times 7 = (8 \times 7) + (4 \times 7)$
- (d) $13 \times 8 = (7 \times 8) + (6 \times 8)$
- (f) $(6 \times 9) + (4 \times 9) = 10 \times 9$
- (h) $(7 \times 12) + (3 \times 12) = 10 \times 12$
- (j) $(13 \times 2) + (13 \times 8) = 13 \times 10$
- (l) $(46 \times 4) + (46 \times 6) = 46 \times 10$

1. A quick Look back

(a) $34 \times 2 = 68$

(b) $17 \times 3 = 51$

(c) $36 \times 4 = 144$

(d) $58 \times 3 = 174$

(e) $35 \times 8 = 280$

(f) $64 \times 9 = 576$

Here are three different ways to do this



$2 \times 3 \times 4 = ?$

$2 \times 3 \times 4 = (2 \times 3) \times 4$
 $\Rightarrow 6 \times 4$
 $= 24$

or

$(2 \times 4) \times 3$
 $\Rightarrow 8 \times 3$
 $= 24$

or

$(3 \times 4) \times 2$
 $\Rightarrow 12 \times 2$
 $= 24$

It makes no difference which two numbers we multiply first.



$(5 \times 8) \times 7 = (8 \times 7) \times 5 = (7 \times 5) \times 8$

2. Do each of these in three different ways.

(a) $2 \times 3 \times 5 = \square$

(b) $2 \times 4 \times 5 = \square$

(c) $7 \times 6 \times 5 = \square$

3. Fill in the frames to make these number sentences true.

(a) $3 \times \boxed{4} = 12$

(b) $5 \times \boxed{6} = 30$

(c) $7 \times \boxed{5} = 35$

(d) $8 \times \boxed{4} = 32$

(e) $9 \times \boxed{6} = 54$

(f) $8 \times \boxed{7} = 56$

(g) $8 \times \boxed{3} = 24$

(h) $10 \times \boxed{8} = 80$

(i) $8 \times \boxed{9} = 72$

(j) $15 = 5 \times \boxed{3}$

(k) $24 = 6 \times \boxed{4}$

(l) $42 = 7 \times \boxed{6}$

(m) $30 = 10 \times \boxed{3}$

(n) $50 = 5 \times \boxed{10}$

(o) $90 = 9 \times \boxed{10}$

4. Complete these:

$7 \times 6 = 7 \times (2 \times 3)$

$5 \times 8 = 5 \times (2 \times 4)$

(a) $3 \times 10 = 3 \times (2 \times \boxed{5})$

(b) $7 \times 10 = 7 \times (2 \times \boxed{5})$

(c) $7 \times 20 = 7 \times (2 \times \boxed{10})$

(d) $5 \times 70 = 5 \times (7 \times \boxed{10})$

(e) $5 \times 30 = 5 \times (3 \times \boxed{10})$

(f) $7 \times 30 = 7 \times (3 \times \boxed{10})$

(g) $11 \times 20 = 11 \times (2 \times \boxed{10})$

(h) $13 \times 50 = 13 \times (5 \times \boxed{10})$

(i) $7 \times 40 = 7 \times (10 \times \boxed{4})$

(j) $11 \times 70 = 11 \times (10 \times \boxed{7})$

(k) $17 \times 50 = 17 \times (\boxed{10} \times \boxed{5})$

(l) $19 \times 30 = 19 \times (\boxed{10} \times \boxed{3})$

(m) $7 \times 20 = (7 \times 2) \times \boxed{10}$

(n) $5 \times 30 = (5 \times 3) \times \boxed{10}$

(o) $9 \times 40 = (9 \times 4) \times \boxed{10}$

(p) $7 \times 60 = (7 \times 6) \times \boxed{10}$

(q) $8 \times 60 = (8 \times \boxed{6}) \times 10$

(r) $9 \times 60 = (9 \times \boxed{6}) \times 10$

$$1. 5 \times 60 = (5 \times 6) \times 10$$

$$= 30 \times 10$$

$$= 300$$

$$2. 7 \times 80 = (7 \times 8) \times 10$$

$$= 56 \times 10$$

$$= 560$$

3. Do the following sums in the same way.

(a) $3 \times 70 = 210$

(b) $5 \times 80 = 400$

(c) $7 \times 90 = 630$

(d) $5 \times 90 = 450$

(e) $8 \times 90 = 720$

(f) $9 \times 60 = 540$

(a) $13 \times 20 = ?$

$$\Rightarrow (13 \times 2) \times 10$$

$$\Rightarrow 26 \times 10$$

$$= 260$$

$$\begin{array}{r} 13 \\ \times 2 \\ \hline 26 \end{array}$$

(b) $17 \times 30 = ?$

$$\Rightarrow (17 \times 3) \times 10$$

$$\Rightarrow 51 \times 10$$

$$= 510$$

$$\begin{array}{r} 17 \\ \times 3 \\ \hline 51 \end{array}$$

4. Do the following sums in the same way.

(a) $13 \times 30 = 390$

(b) $17 \times 40 = 680$

(c) $19 \times 30 = 570$

(d) $16 \times 60 = 960$

(e) $18 \times 50 = 900$

(f) $14 \times 70 = 980$

(g) $28 \times 30 = 840$

(h) $47 \times 20 = 940$

(i) $29 \times 30 = 870$

$26 \times 30 = ?$

$$\Rightarrow (26 \times 3) \times 10$$

$$\Rightarrow 78 \times 10$$

$$= 780$$

$$\begin{array}{r} 26 \\ \times 3 \\ \hline 78 \end{array}$$

or short way

Write zero first.

$$\begin{array}{r} 26 \\ \times 30 \\ \hline 780 \end{array}$$

5. Do these the short way (multiplying by 10 by writing the zero first).

(a) $\begin{array}{r} 23 \\ \times 40 \\ \hline 920 \end{array}$

(b) $\begin{array}{r} 34 \\ \times 20 \\ \hline 680 \end{array}$

(c) $\begin{array}{r} 37 \\ \times 30 \\ \hline 1110 \end{array}$

(d) $\begin{array}{r} 28 \\ \times 50 \\ \hline 1400 \end{array}$

(e) $\begin{array}{r} 36 \\ \times 60 \\ \hline 2160 \end{array}$

(f) $\begin{array}{r} 24 \\ \times 70 \\ \hline 1680 \end{array}$

(g) $\begin{array}{r} 34 \\ \times 2 \\ \hline 68 \end{array}$

(h) $\begin{array}{r} 17 \\ \times 5 \\ \hline 85 \end{array}$

(i) $\begin{array}{r} 36 \\ \times 7 \\ \hline 252 \end{array}$

(j) $\begin{array}{r} 58 \\ \times 4 \\ \hline 232 \end{array}$

(k) $\begin{array}{r} 35 \\ \times 8 \\ \hline 280 \end{array}$

(l) $\begin{array}{r} 64 \\ \times 9 \\ \hline 576 \end{array}$

1a

$$\begin{array}{r} 19 \\ \times 16 \\ \hline 114 \\ + 1190 \\ \hline 304 \end{array}$$

e

$$\begin{array}{r} 23 \\ \times 17 \\ \hline 161 \\ + 280 \\ \hline 391 \end{array}$$

c

$$\begin{array}{r} 43 \\ \times 17 \\ \hline 301 \\ + 430 \\ \hline 731 \end{array}$$

g

$$\begin{array}{r} 53 \\ \times 18 \\ \hline 424 \\ + 530 \\ \hline 954 \end{array}$$

b

$$\begin{array}{r} 17 \\ \times 18 \\ \hline 136 \\ + 1170 \\ \hline 306 \end{array}$$

f

$$\begin{array}{r} 37 \\ \times 16 \\ \hline 220 \\ + 370 \\ \hline 592 \end{array}$$

d

$$\begin{array}{r} 29 \\ \times 16 \\ \hline 174 \\ + 290 \\ \hline 464 \end{array}$$

h

$$\begin{array}{r} 69 \\ \times 14 \\ \hline 276 \\ + 690 \\ \hline 966 \end{array}$$

c

$$\begin{array}{r} 15 \\ \times 19 \\ \hline 135 \\ + 150 \\ \hline 285 \end{array}$$

2a.

$$\begin{array}{r} 25 \\ \times 17 \\ \hline 175 \\ + 250 \\ \hline 425 \end{array}$$

e

$$\begin{array}{r} 67 \\ \times 13 \\ \hline 201 \\ + 670 \\ \hline 871 \end{array}$$

i

$$\begin{array}{r} 79 \\ \times 12 \\ \hline 158 \\ + 790 \\ \hline 948 \end{array}$$

d

$$\begin{array}{r} 13 \\ \times 18 \\ \hline 104 \\ + 130 \\ \hline 234 \end{array}$$

b.

$$\begin{array}{r} 38 \\ \times 16 \\ \hline 288 \\ + 380 \\ \hline 608 \end{array}$$

f

$$\begin{array}{r} 457 \\ \times 15 \\ \hline 2350 \\ + 4570 \\ \hline 7050 \end{array}$$

j

$$\begin{array}{r} 83 \\ \times 19 \\ \hline 747 \\ + 830 \\ \hline 1577 \end{array}$$

k

$$\begin{array}{r}
 96 \\
 \times 17 \\
 \hline
 672 \\
 + 960 \\
 \hline
 1632
 \end{array}$$

o

$$\begin{array}{r}
 60 \\
 \times 17 \\
 \hline
 420 \\
 + 600 \\
 \hline
 1020
 \end{array}$$

l

$$\begin{array}{r}
 82 \\
 \times 19 \\
 \hline
 738 \\
 + 820 \\
 \hline
 1558
 \end{array}$$

I've only used blue pen because my pencil wouldn't photograph clearly enough!

m

$$\begin{array}{r}
 95 \\
 \times 14 \\
 \hline
 380 \\
 + 950 \\
 \hline
 1330
 \end{array}$$

AND I've no sharpener!!

n

$$\begin{array}{r}
 88 \\
 \times 18 \\
 \hline
 704 \\
 + 880 \\
 \hline
 1584
 \end{array}$$