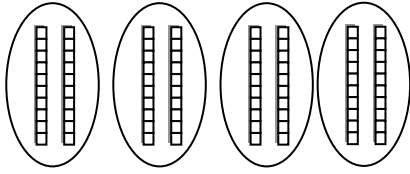


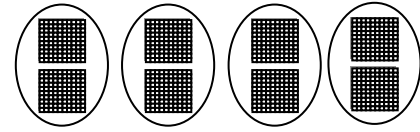
NS5-21: Multiples of 10

To multiply 4×20 , Allen makes 4 groups containing 2 tens blocks ($20 = 2$ tens):



$$4 \times 20 = 4 \times 2 \text{ tens} = 8 \text{ tens} = 80$$

To multiply 4×200 , Allen makes 4 groups containing 2 hundreds blocks ($200 = 2$ hundreds):

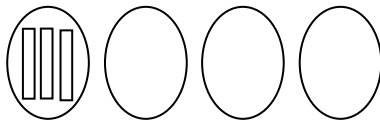


$$4 \times 200 = 4 \times 2 \text{ hundreds} = 8 \text{ hundreds} = 800$$

Allen notices a pattern: $4 \times 2 = 8$ $4 \times 20 = 80$ $4 \times 200 = 800$

1. Draw a model for each multiplication statement, then calculate the answer. The first one is started:

a) 4×30



$$4 \times 30 = 4 \times \underline{\quad} \text{ tens} = \underline{\quad} \text{ tens} = \underline{\quad}$$

b) 2×20

$$2 \times 20 = 2 \times \underline{\quad} \text{ tens} = \underline{\quad} \text{ tens} = \underline{\quad}$$

2. Regroup to find the answer. The first one is done for you:

a) $3 \times 70 = 3 \times \underline{7} \text{ tens} = \underline{21} \text{ tens} = \underline{210}$

b) $4 \times 50 = 4 \times \underline{\quad} \text{ tens} = \underline{\quad} \text{ tens} = \underline{\quad}$

c) $3 \times 40 = 3 \times \underline{\quad} \text{ tens} = \underline{\quad} \text{ tens} = \underline{\quad}$

d) $6 \times 30 = 6 \times \underline{\quad} \text{ tens} = \underline{\quad} \text{ tens} = \underline{\quad}$

3. Complete the pattern by multiplying:

a) $2 \times 3 = \underline{\quad}$	b) $5 \times 1 = \underline{\quad}$	c) $5 \times 4 = \underline{\quad}$	d) $4 \times 2 = \underline{\quad}$
$2 \times 30 = \underline{\quad}$	$5 \times 10 = \underline{\quad}$	$5 \times 40 = \underline{\quad}$	$4 \times 20 = \underline{\quad}$
$2 \times 300 = \underline{\quad}$	$5 \times 100 = \underline{\quad}$	$5 \times 400 = \underline{\quad}$	$4 \times 200 = \underline{\quad}$

4. Multiply:

a) $5 \times 30 = \underline{\quad}$	b) $30 \times 4 = \underline{\quad}$	c) $4 \times 40 = \underline{\quad}$	d) $50 \times 3 = \underline{\quad}$
e) $3 \times 500 = \underline{\quad}$	f) $500 \times 6 = \underline{\quad}$	g) $3 \times 80 = \underline{\quad}$	h) $500 \times 5 = \underline{\quad}$
i) $2 \times 900 = \underline{\quad}$	j) $70 \times 6 = \underline{\quad}$	k) $8 \times 40 = \underline{\quad}$	l) $900 \times 3 = \underline{\quad}$



5. Draw a base ten model (using cubes to represent thousands) to show: $6 \times 1\,000 = 6\,000$.

6. Knowing that $4 \times 2 = 8$, how can you use this fact to multiply $4 \times 2\,000$? Explain.