

TWO TWO-DIGIT FACTORS

Provide the students with flats. Ask: "What array can we see in a flat? How could we use flats to build an array for 20×30 ? How could we record this?" We could write:

$$20 \times 30 = 600 \text{ or } 2 \text{ tens} \times 3 \text{ tens} = 6 \text{ hundreds}$$

Continue building arrays and recording. When the students have mastered the concept, review and record.

$$2 \times 3 = 6 \quad 2 \times 3 \text{ tens} = 6 \text{ tens} \quad 2 \text{ tens} \times 3 \text{ tens} = 6 \text{ hundreds}$$

$$3 \times 4 = 12 \quad 3 \times 4 \text{ tens} = 12 \text{ tens} \quad 3 \text{ tens} \times 4 \text{ tens} = 12 \text{ hundreds}$$

Ask questions to lead to the generalizations that ones \times tens = tens but tens \times tens = hundreds.

Write an example such as 23×35 on the chalkboard. Ask: "How can we make an array for this example? How many rows do we need? How many columns? Can we use flats to help us get started? How can we make 3 more rows this (pointing) long? How can we make 5 more columns this (pointing) long? What should we use to fill in the corner?"

Build several arrays together with the children. Then have them work in pairs or small groups to build arrays for examples written on the chalkboard. Walk around and check.