

EXTENSION

Use anytime after Session 2.4.

Multiplication Compare with Digit Cards



MATH FOCUS POINTS

- Solving 2-digit by 2-digit multiplication problems
- Comparing multiplication problems to determine which product is greater

MATERIALS: Digit Cards (1 deck per pair), G1 (as needed), S4

RESOURCE MASTERS, S4

ACTIVITY

NAME _____ DATE _____

Multiplication Compare with Digit Cards

Write $>$, $<$, or $=$ in each box. In the space to the right of each problem, write how you decided which product is greater.
 Challenge: Try to compare products without finding the exact answer to the multiplication problems.
Explanations will vary. Review students' work.

1	31×36	$>$	22×42	
2	27×84	$>$	25×81	
3	16×69	$=$	48×23	
4	53×35	$<$	55×34	

5 Use the digits 4, 1, 8, and 6 to make a 2-digit by 2-digit multiplication problem with the greatest product possible. How do you know this is the greatest product possible?
 $81 \times 64 = 5,184$ or $64 \times 81 = 5,184$;
Explanations will vary.

UNIT 1 | S4 | INVESTIGATION 2 © Pearson Education 5

In this activity, students play a variation of *Multiplication Compare* introduced in Session 2.3. In this version of the game, students use Digit Cards to generate 2-digit by 2-digit multiplication problems.

Distribute a deck of Digit Cards to each pair. **Remove the "0" cards from your deck of Digit Cards. Shuffle the cards and give each player half of the deck.** Explain that each player selects the top four cards and makes two 2-digit factors using the cards in the order in which they were drawn. Use the cards to demonstrate. **I picked 3, 5, 7, and another 5. So I need to multiply 35 by 75.**

Have pairs play this variation of *Multiplication Compare* for a given amount of time or until one player wins all the cards.

If you feel students need more of a challenge, have them play again, but this time allow them to use the four cards to make *any* 2-digit by 2-digit multiplication problem. You might want to discuss some of the strategies students are using. **I see you made 64×73 . Why do you think that's the greatest possible product?**

STUDENTS MIGHT SAY



"I used estimation and figured 60×70 is 4,200. That's more than if I put the smaller digits in the tens places, like 36×47 , which would only be about 2,000. So then I checked which had a greater product, 63×74 or 64×73 ."

Distribute copies of *Multiplication Compare with Digit Cards* (S4).

DIFFERENTIATION

ENGLISH LANGUAGE LEARNERS Partner Talk As students play the game, have them discuss how they can compare the products without actually doing the multiplication. Ask questions to stimulate partner discussions, such as: **How can you tell which product is greater without multiplying? Can you estimate? Look at the factors. How can they help you?**

ADDITIONAL RESOURCE

Math Words and Ideas Multiplication Strategies

