

Times Tussle

3 or 4 players

Multiplying by five and ten

Purpose

In this game, the students practice multiplying by five and ten. The strategies they use will vary, for example, to calculate 3×5 they may count in fives, use a known fact such as 2×5 , or multiply by ten first then halve their answer.

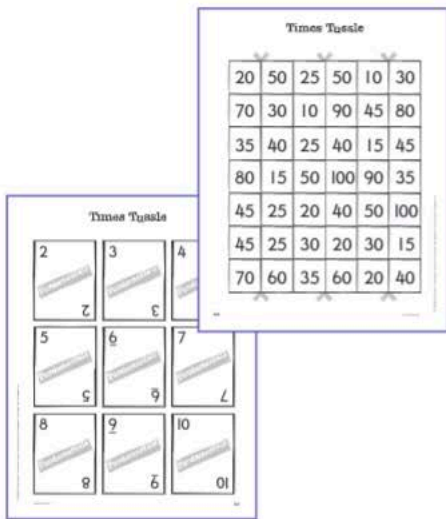
Materials

Each group of students will need

- A 'Times Tussle' game board (page 30) as shown below.
- One (1) set of numeral cards. Make four (4) copies of page 31 as shown below. Cut out and laminate the cards to make one set.

Each player will need

- Fourteen (14) transparent counters (a different color for each player).



How to Play

The aim is to arrange four counters in a 2×2 square or adjacently in a horizontal, vertical, or diagonal line.

- The numeral cards are shuffled and placed face down in a stack.
- The first player draws a card and decides whether to multiply the number by five or by ten to make a product on the game board.

Example: Billy draws 6. He can multiply 6×5 (30) or 6×10 (60).

- The player claims a product on the game board by covering it with a counter. Although some numbers appear more than once on the game board, a player may only claim one number for each turn. If the two possible products are unavailable, the player misses a turn.
- The card is returned to the bottom of the stack.
- Each of the other players has a turn.
- The first player to make a 2×2 square or a line of four adjacent counters is the winner.

Reading the Research

Being able to use counting sequences other than counting by ones appears to be one of the keys in moving from the less to more sophisticated strategies. Therefore practice in skip counting forwards and backwards by multiples of numbers may be beneficial (Kouba & Franklin, 1993).

Before the Game

Give the students practice counting by fives. This can be done using hands held up by the students, one at a time, or by counting in five-minute intervals around a clock face or on a hundred chart. Provide similar practice counting in tens. Have the students count each time you place a 'tens' rod (base-ten block) on the overhead projector. The students should say, *One ten is ten. Two tens are twenty...* and so on to one hundred.

Discuss ways to calculate 3×5 . For example, the students might count in fives, or build up from 2×5 . They may also calculate 3×10 , then halve their answer.

During the Game

Invite students to verbalize the strategies they use to calculate the fives facts. Do they use the same strategy for each possible example? Do they see that skip counting is an inefficient strategy when there is a 'long way' to count?

Effective questioning will help students to see the link between multiplication and division. Look for students who only need one number, for example 30, to complete a line or square. Ask, *What numeral card do you need so you can cover that number? How do you know?* The discussion will vary, but the students should be able to tell you that they need 6 because $30 \div 5 = 6$, or 3 because $30 \div 10 = 3$.

After the Game

Use the overhead projector to play a game with the class. Use the game to discuss strategies and raise various questions, such as, *How do you decide whether to multiply the number by 10 or by 5? Where can I place a counter if I turn up a 6 ...3 ...or 8? If I needed 45 to win, which card would I need to turn up?* (9 because $9 \times 5 = 45$.) *Which cards would allow me to cover 40?* (8 and 4 because $8 \times 5 = 40$ and $4 \times 10 = 40$.) *Which card would allow me to cover 60?* (6 because $6 \times 10 = 60$.) *What numbers on the game board can be covered by turning up more than one card?* (20, 30, 40, and 50.)

Beyond the Game

Change the way in which the game is won. The winner can be the player who has the greatest number of counters on the board after a set number of rounds, for example ten. The players may need to use tallies to keep track of the number of rounds.

Times Tussle

20	50	25	50	10	30
70	30	10	90	45	80
35	40	25	40	15	45
80	15	50	100	90	35
45	25	20	40	50	100
45	25	30	20	30	15
70	60	35	60	20	40

Times Tussle

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Fundamentals

2

3

Fundamentals

3

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Fundamentals

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Fundamentals

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Fundamentals

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Fundamentals

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Fundamentals

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Fundamentals

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Fundamentals

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