

visiting tens – Subtraction

Sharpen mental maths skills for subtracting within 100. Use the 'make a ten' strategy and open number lines and to subtract 1-digit numbers from 2-digit numbers.

Mathematical understanding and skills

Fluently subtract within 100, using strategies based on place value.

Prerequisite skills

Students need to be fluent with subtraction facts within 20 (Games 2 and 3), skip-counting (Game 4) and also have a solid understanding of place value (Game 5). Students should also be able to fluently use strategies based on place value to add within 100 (Game 6).

Maths vocabulary

difference

Materials

For each pair of students:

- Deck (4 sets) of number cards 1–9 (page 67)
- Spinner (page 69)
- Coloured markers, different colour for each player
- Student-made open number line

| Warm-up | 'Visiting tens' game |
|---------|----------------------|
| ✓ | ✓ |
| ✓ | |
| ✓ | |
| ✓ | |

visiting tens – Subtraction



Warm-up game: Jump to cross zero

Number of players: 2

Materials:

For each pair of students:

- Deck (4 sets) of number cards 1–9 (page 67)
- Spinner (page 69)
- Coloured markers, different colour for each player
- Student-made open number line

Object: Use an open number line to subtract. Be the first player whose difference would go past (below) zero.

Note: For the first round or two, some students may find it helpful to mark the multiples of ten on the number line.

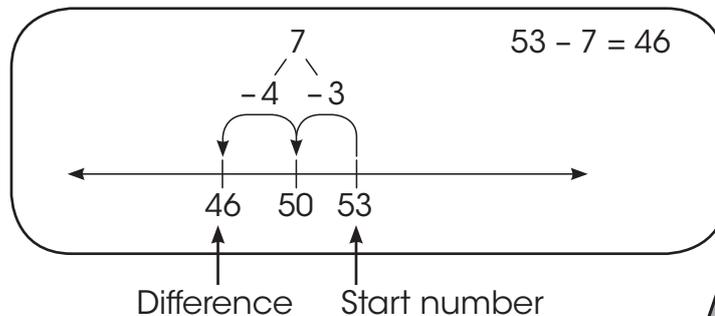
Directions:

1. Player 1 draws two cards to make the smallest possible 2-digit start number and then marks that number on the number line with his/her own marker.
2. Players take turns spinning and showing how to subtract the spinner number from the last recorded number on the number line. Players must show jumps that land on multiples of ten.

Example:

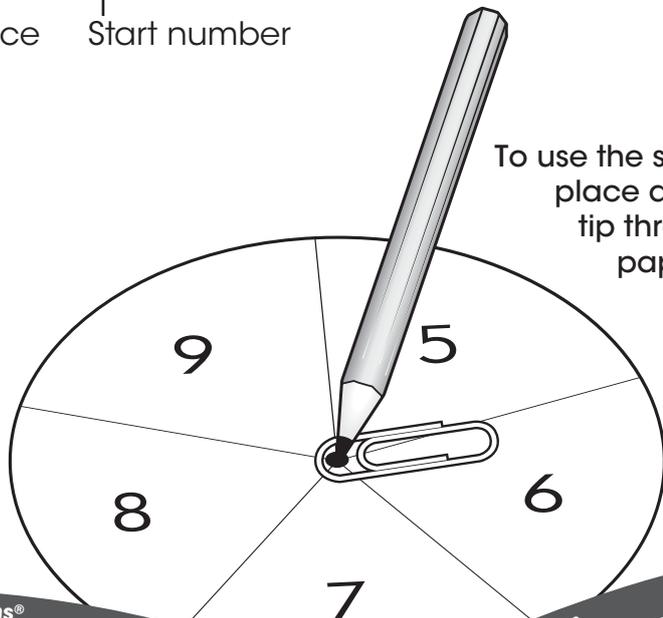
'Jump numbers' go on top

Number line numbers go on the bottom.



3. The winner is the player whose difference would go past (below) zero on the number line.

To use the spinner, place a pencil tip through a paperclip.



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Explaining the game

Number of players: 2

Materials:

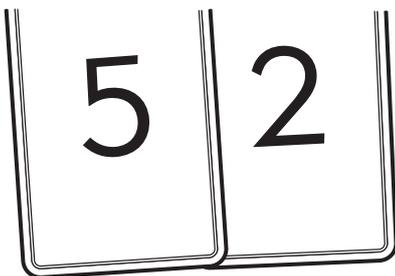
- Deck (4 sets) of number cards 1–9 (page 67) – half for each player

Object: Win the most cards by subtracting numbers correctly and quickly. Mental strategies, open number lines or other written methods may be used.

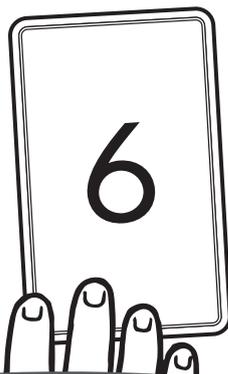
How to play:

1. Use one card from each player's deck to make a 2-digit 'start number' for each round.
2. Players take turns quietly saying, '1, 2, 3, go'. Then each player draws another card from his/her own deck and subtracts that number from the shared 'start number'.
3. Each player says the answer to his/her problem.
4. The first player to say the difference correctly wins all four cards.
5. If a player is wrong, the other player wins all four cards.
6. If both players say the difference correctly at the same time, they turn the cards over and play another round. The winner takes all eight of the cards.
7. Players may use a hundred chart or other tools to check their work after they give their answers.
8. Play continues until all the cards in both decks are used. The player with the most cards wins.

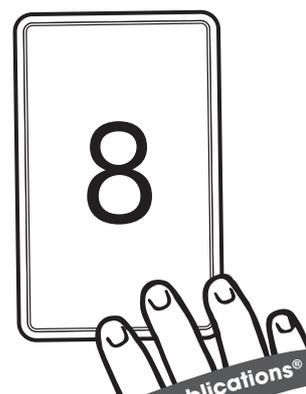
Start number: 52



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Differentiation

Warm-up game: Jump to cross zero

More support

- Allow students to mark a number line with multiples of ten as long as they need to do that.
- Encourage the use of ten-frame cards to represent the spinner number, to help students visualise how to decompose numbers.

Visiting tens – Subtraction game

More support

- Play a preliminary game with a small deck (2 sets) of number cards 1–9. The object is to win as many cards as possible.

How to play:

1. Draw two cards to create the smallest possible 'start number'.
2. Take turns drawing one card and subtracting the number on that card from the 'start number'.
 - If correct, put your digit card in a 'win pile'.
 - If other player notices an error, he/she wins that card.
 - Keep the same start number. Repeat step 2 until the deck is used up.
3. The winner is the player who has the most cards in his/her 'win pile'.

Challenge

- Draw 3-digit 'start numbers'.

Deepening the understanding

Ask the class

Explain how you could use jumps that visit multiples of ten in your head to subtract ...

$$56 - 8, 64 - 7$$

What is a general rule for doing this process in your head?

After a student shares an idea, ask the class if they agree or disagree and why.

Mathematical capabilities

Reason abstractly and quantitatively.
Understanding, fluency and reasoning.
Look for and make use of structure.

Construct viable arguments and critique the reasoning of others.