

Math Marathon: Race to 100!

Teacher's Guide

Before Lesson:

1. Gather materials and print enough copies for each student/group.
2. Decide what type of numbers and equations your students will use during the game. For example, addition, subtraction, positive and negative numbers, exponents, integers, etc.

During Lesson:

1. Introduce the game and review the game rules. Let your students know which numbers they will be allowed to use and, if needed, go over a few examples of each.
2. Display the Equation Sheet and Game Board and play a few example rounds to show students how to create their equations, write them on their Equation Sheets, and mark their progress on the game board.
3. Move students into groups of two or three, or allow students to choose their own groups.
4. Pass out dice or, if students are creating their own, the materials needed to create them. Allow time for students to assemble dice.
5. Once students have two dice, pass out the Equation Sheets, Game Boards, and Game Markers to each group and allow them to start playing.
6. Move around the room to support and cheer on students as needed.
7. When students have successfully created enough equations to reach 100 exactly, the game is over. You may collect the Equation Sheet as an assessment/completion grade.
8. Pass out the Reflection Sheets to each student and have them complete it while waiting for other groups to finish.

After Lesson: Reflection and discussion:

- Which equations were most helpful in reaching 100? Why do you think that is?
- How did you overcome any challenges you experienced while playing?
- What are some other ways you could play this game that would be fun?

Extension activities:

- Ask students to create their own variations of the game with different target numbers, rules, or equation restrictions.
- Have students explore real-life scenarios where mathematical calculations are used to reach a target, such as budgeting or planning a trip, and share their findings with the class.

TIME REQUIRED: 30 to 55 minutes (Time may vary depending upon the type of math problems the students are required to create and solve.)

GRADE LEVEL: 6–8

OBJECTIVES:

1. Students will create and solve a variety of mathematical equations to reach the target number of 100.
2. Students will engage in mathematical reasoning by evaluating the outcomes of different equations and predicting the most efficient strategies to reach 100.
3. Students will practice mathematical thinking by explaining their chosen equations and justifying their strategies to their classmates.

MATERIALS NEEDED:

- Dice or dice template sheets, 2 per student group
- Scissors, tape and/or glue (if students are making their own dice)
- Math Marathon Equation Sheets (1 per student)
- Math Marathon Game Board (1 per student group)
- Math Marathon Reflection Sheets (1 per student)
- Game markers, i.e. coins, dried beans, buttons, colored paper cut into small squares (1 per student)
- Pencils

Game Rules



Objective:

Be the first player or team to reach exactly 100 points by creating equations using two rolled dice.

Setup:

Players take turns rolling two dice.

Each player starts with a score of 0.

Gameplay:

ROUND 1: Player 1 rolls two dice. Using the numbers rolled, create an equation using the number sets your teacher provided. Write down your equation and its correct answer on your Math Marathon Equation Sheet. Move your game marker to the number on the Math Marathon Game Board that was the answer of your first equation. This ends your first turn.

Player 2 goes next and completes the same steps. If playing with more than two people, Player 3 goes next and completes the same steps.

ROUND 2: Player 1 rolls two dice again and creates a new equation with the numbers rolled, writing it on their Math Marathon Equation Sheet.

Player 1 adds the answer to the second equation to the answer to their first equation, writes the sum in the shaded box in the corner of their Round 2 equation box, and moves their game marker to that sum on the Math Marathon Game Board. This ends their turn.

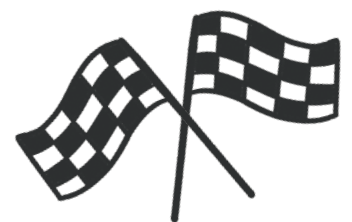
Players 2 and 3 then complete the same steps.

ROUNDS 3 AND UP: Gameplay continues until one player or team reaches exactly 100 points.

If your score goes over 100, your turn ends, and you don't add any points to your score for that turn. Make sure you write your equation down on your Equation Sheet and write an "X" in the POINTS box for that round.

Winning:

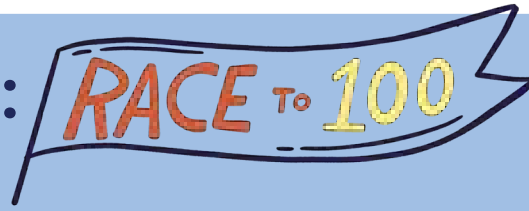
The first player or team to reach exactly 100 points wins the game. If you believe you have won, raise your hand so your teacher can check your work and give you further instructions.



NAME: _____ DATE: _____



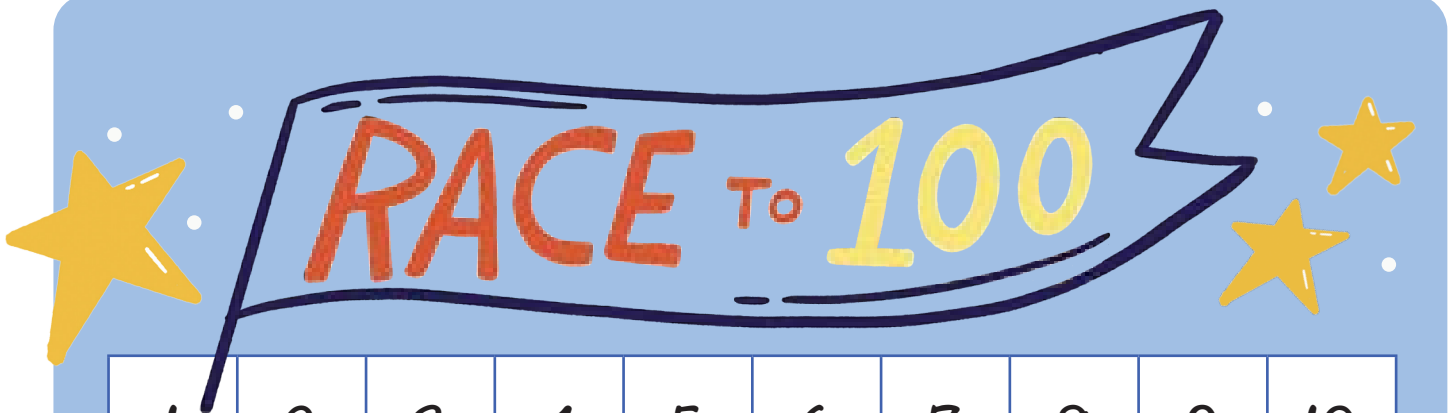
Math Marathon: Equation Sheet



DIRECTIONS: Write your equation in the box for each round. After Round 2, add the answers from both rounds and write the total in the Round 2 Total Box. Move your game marker to that number. In each following round, add the new answer to the total from the previous round. Win by reaching exactly 100!

Round 1:		Round 11:	Total:
Round 2:	Total:	Round 12:	Total:
Round 3:	Total:	Round 13:	Total:
Round 4:	Total:	Round 14:	Total:
Round 5:	Total:	Round 15:	Total:
Round 6:	Total:	Round 16:	Total:
Round 7:	Total:	Round 17:	Total:
Round 8:	Total:	Round 18:	Total:
Round 9:	Total:	Round 19:	Total:
Round 10:	Total:	Round 20:	Total:

USE THE BACK OF THE PAPER IF YOU NEED TO KEEP GOING!



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	97	88	89	90
91	92	93	94	95	96	97	98	99	100

NAME: _____

DATE: _____

Reflection Sheet

RACE To 100

DIRECTIONS: Answer the following questions after playing Math Marathon: Race to 100!

1. How would you rate this game? (Circle one)



Fine



Fun



Awesome!

2. Why did you give it that rating? _____

3. Which equations were most helpful in reaching 100? Why do you think that is?

4. How did you overcome any challenges you experienced while playing?

5. What are some other ways you could play this game that would be fun?

Print-and-Fold Dice Template

To Assemble:

1. Print and cut out template and fold along the lines wherever two squares meet.
2. Apply glue on the rectangular flaps.
3. Stick the flaps onto the other end to make your dice.

