Task card 1 — The Rational Root Theorem

According to the Rational Root Theorem, could $-\frac{8}{5}$ be a root of $f(x) = 4x^3 - 3x^2 + 6x + 10$? Write yes or no.

Task card 2 — The Rational Root Theorem

How many different possible rational roots (counting + and - separately) does the Rational Root Theorem list for $f(x) = 4x^3 - 2x^2 + 15$?

Task card 3 — The Rational Root Theorem

$f(x) = 2x^3 + 9x^2 + 3x - 9$ has exactly one rational root. Find it.

Task card 4 — The Rational Root Theorem

$f(x) = 2x^3 - x^2 + 11x + 6$ has exactly one rational root. Find it.

Task card 5 — The Rational Root Theorem

According to the Rational Root Theorem, could $\frac{1}{3}$ be a root of $f(x) = 6x^3 - 4x^2 + 2x + 9$? Write yes or no.

Task card 6 — The Rational Root Theorem

How many different possible rational roots (counting + and - separately) does the Rational Root Theorem list for $f(x) = 2x^3 + x^2 - 2x + 3$?

Task card 7 The Rational Root Theorem

$f(x) = 2x^3 + 9x^2 + 16x + 6$ has exactly one rational root. Find it.

Task card 8 The Rational Root Theorem

According to the Rational Root Theorem, could 3 be a root of $f(x) = 3x^3 + 6x^2 + 4x + 15$? Write yes or no.

Task card 9 The Rational Root Theorem

According to the Rational Root Theorem, could 6 be a root of $f(x) = 4x^3 + 5x^2 - 8x - 10$? Write yes or no.

Task card 10 The Rational Root Theorem

How many different possible rational roots (counting + and - separately) does the Rational Root Theorem list for $f(x) = 5x^3 + 6x^2 + 2x - 5$?

Task card 11 The Rational Root Theorem

$f(x) = 3x^3 - x^2 + 4x + 4$ has exactly one rational root. Find it.

Task card 12 The Rational Root Theorem

$f(x) = x^3 - 7x^2 + 18x - 18$ has exactly one rational root. Find it.

Task card 13 — The Rational Root Theorem

According to the Rational Root Theorem, could $-\frac{1}{4}$ be a root of $f(x) = 6x^3 - 7x^2 + x + 10$? Write yes or no.

Task card 14 — The Rational Root Theorem

How many different possible rational roots (counting + and - separately) does the Rational Root Theorem list for $f(x) = 5x^3 + 5x^2 + 2x - 12$?

Task card 15 — The Rational Root Theorem

$f(x) = 4x^3 + 5x^2 - 30x + 18$ has exactly one rational root. Find it.

Task card 16 — The Rational Root Theorem

According to the Rational Root Theorem, could -2 be a root of $f(x) = 5x^3 - 7x^2 + 4x - 10$? Write yes or no.

Task card 17 — The Rational Root Theorem

According to the Rational Root Theorem, could $-\frac{15}{2}$ be a root of $f(x) = 6x^3 - 4x^2 - 9x + 15$? Write yes or no.

Task card 18 — The Rational Root Theorem

How many different possible rational roots (counting + and - separately) does the Rational Root Theorem list for $f(x) = 3x^3 - 5x^2 - 5$?

Task card 19 The Rational Root Theorem

$f(x) = 2x^3 - 3x^2 - 10x - 4$ has exactly one rational root. Find it.

Task card 20 The Rational Root Theorem

$f(x) = 2x^3 - 3x^2 + 8x - 12$ has exactly one rational root. Find it.

Task card 21 The Rational Root Theorem

According to the Rational Root Theorem, could $\frac{5}{4}$ be a root of $f(x) = 3x^3 + x^2 + 3$? Write yes or no.

Task card 22 The Rational Root Theorem

How many different possible rational roots (counting + and - separately) does the Rational Root Theorem list for $f(x) = 4x^3 - 3x^2 + 4x + 3$?

Task card 23 The Rational Root Theorem

$f(x) = 3x^3 - 13x^2 + 19x - 5$ has exactly one rational root. Find it.

Task card 24 The Rational Root Theorem

According to the Rational Root Theorem, could $-\frac{5}{3}$ be a root of $f(x) = 5x^3 - 7x^2 + 6x - 12$? Write yes or no.

The Rational Root Theorem Task Cards

Recording sheet · Grade 11 · Use the Rational Root Theorem.

Name: _____ Date: _____

Scan to check your answers

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24

The Rational Root Theorem Task Cards: Answer Key

Grade 11 · Hard

The answers online

1. no	**2.** 24	**3.** $-\frac{3}{2}$
4. $-\frac{1}{2}$	**5.** yes	**6.** 8
7. $-\frac{1}{2}$	**8.** yes	**9.** no
10. 6	**11.** $-\frac{2}{3}$	**12.** 3
13. no	**14.** 24	**15.** $\frac{3}{4}$
16. yes	**17.** yes	**18.** 8
19. $-\frac{1}{2}$	**20.** $\frac{3}{2}$	**21.** no
22. 12	**23.** $\frac{1}{3}$	**24.** no