Task card 1 Rational Functions: Asymptotes & H...

Find the vertical asymptotes of $f(x) = \frac{x + 9}{x^2 - x - 42}$.

Task card 2 Rational Functions: Asymptotes & H...

The graph of $f(x) = \frac{x^2 - x - 72}{x + 8}$ has a hole at $x = -8$. Find the y-coordinate of the hole.

Task card 3 Rational Functions: Asymptotes & H...

Find the slant asymptote of $f(x) = \frac{x^2 + 8}{x + 5}$.

Task card 4 Rational Functions: Asymptotes & H...

Find the horizontal asymptote of $f(x) = \frac{7x^2 - 2x - 4}{3x^2 - 3}$.

Task card 5 Rational Functions: Asymptotes & H...

Find the slant asymptote of $f(x) = \frac{x^2 + 5x - 2}{x - 2}$.

Task card 6 Rational Functions: Asymptotes & H...

The graph of $f(x) = \frac{x^2 - 16}{x + 4}$ has a hole at $x = -4$. Find the y-coordinate of the hole.

Task card 7 Rational Functions: Asymptotes & H...

Find the slant asymptote of $f(x) = \frac{x^2 + 3x - 4}{x + 1}$.

Task card 8 Rational Functions: Asymptotes & H...

Find the slant asymptote of $f(x) = \frac{x^2 + x - 6}{x - 1}$.

Task card 9 Rational Functions: Asymptotes & H...

Find the vertical asymptotes of $f(x) = \frac{x - 2}{x^2 + 2x - 24}$.

Task card 10 Rational Functions: Asymptotes & H...

The graph of $f(x) = \frac{x^2 - 10x + 9}{x - 9}$ has a hole at $x = 9$. Find the y-coordinate of the hole.

Task card 11 Rational Functions: Asymptotes & H...

Find the slant asymptote of $f(x) = \frac{x^2 + 5x - 9}{x + 2}$.

Task card 12 Rational Functions: Asymptotes & H...

Find the horizontal asymptote of $f(x) = \frac{-x + 2}{3x + 4}$.

Task card 13 Rational Functions: Asymptotes & H...

Find the slant asymptote of $f(x) = \frac{x^2 + 3x + 6}{x - 4}$.

Task card 14 Rational Functions: Asymptotes & H...

The graph of $f(x) = \frac{x^2 + 8x + 12}{x + 6}$ has a hole at $x = -6$. Find the y-coordinate of the hole.

Task card 15 Rational Functions: Asymptotes & H...

Find the slant asymptote of $f(x) = \frac{x^2 - 2x - 2}{x + 4}$.

Task card 16 Rational Functions: Asymptotes & H...

Find the horizontal asymptote of $f(x) = \frac{5x^2 + 6x + 4}{3x^2 + 2}$.

Task card 17 Rational Functions: Asymptotes & H...

Find the vertical asymptotes of $f(x) = \frac{x - 6}{x^2 + x - 72}$.

Task card 18 Rational Functions: Asymptotes & H...

The graph of $f(x) = \frac{x^2 - x - 20}{x + 4}$ has a hole at $x = -4$. Find the y-coordinate of the hole.

Task card 19 Rational Functions: Asymptotes & H...

Find the slant asymptote of $f(x) = \frac{x^2 - 5x - 1}{x + 5}$.

Task card 20 Rational Functions: Asymptotes & H...

Find the horizontal asymptote of $f(x) = \frac{4x^2 - 8x + 1}{4x^2 + 9}$.

Task card 21 Rational Functions: Asymptotes & H...

Find the slant asymptote of $f(x) = \frac{x^2 + 2x - 2}{x + 3}$.

Task card 22 Rational Functions: Asymptotes & H...

The graph of $f(x) = \frac{x^2 - 8x + 12}{x - 6}$ has a hole at $x = 6$. Find the y-coordinate of the hole.

Task card 23 Rational Functions: Asymptotes & H...

Find the slant asymptote of $f(x) = \frac{x^2 + 6x + 4}{x - 3}$.

Task card 24 Rational Functions: Asymptotes & H...

Find the horizontal asymptote of $f(x) = \frac{8x - 6}{5x + 1}$.

Rational Functions: Asymptotes & Holes Task Cards

Recording sheet · Grade 12 · Answer each question. Write vertical asymptotes like x = 3 (two of them: x = -1 or x = 3) and horizontal or slant asymptotes like y = 2/3 or y = x + 1.

Scan to check your answers

Name: _____ Date: _____

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

Rational Functions: Asymptotes & Holes Task Cards: Answer Key

Grade 12 · Hard

The answers online

1. x = -6 or x = 7	**2.** -17	**3.** y = x - 5
4. $y = \frac{7}{3}$	**5.** y = x + 7	**6.** -8
7. y = x + 2	**8.** y = x + 2	**9.** x = -6 or x = 4
10. 8	**11.** y = x + 3	**12.** $y = -\frac{1}{3}$
13. y = x + 7	**14.** -4	**15.** y = x - 6
16. $y = \frac{5}{3}$	**17.** x = -9 or x = 8	**18.** -9
19. y = x - 10	**20.** y = 1	**21.** y = x - 1
22. 4	**23.** y = x + 9	**24.** $y = \frac{8}{5}$