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

Find the vertical asymptote of $f(x) = \frac{4x + 7}{x + 4}$.

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

Find the horizontal asymptote of $f(x) = \frac{-6x + 8}{6x + 2}$.

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

Find the vertical asymptotes of $f(x) = \frac{x + 7}{x^2 + x - 2}$.

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

The graph of $f(x) = \frac{x^2 + x - 12}{x + 4}$ has a hole at $x = -4$. Find the y-coordinate of the hole.

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

Find the x-intercept of $f(x) = \frac{x + 5}{x + 7}$. Write it as $x = a$.

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

Find the horizontal asymptote of $f(x) = \frac{5x - 6}{2x^2 - 4x + 7}$.

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

Find the horizontal asymptote of $f(x) = \frac{5x - 8}{2x^2 + x + 3}$.

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

Find the horizontal asymptote of $f(x) = \frac{6x + 6}{2x^2 + 4x + 7}$.

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

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

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

Find the horizontal asymptote of $f(x) = \frac{-x^2 + 3x + 3}{3x^2 + 8}$.

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

Find the vertical asymptotes of $f(x) = \frac{x - 8}{x^2 - 9x + 20}$.

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

The graph of $f(x) = \frac{x^2 - 4x - 21}{x + 3}$ has a hole at $x = -3$. Find the y-coordinate of the hole.

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

Find the x-intercept of $f(x) = \frac{4x - 32}{x + 7}$. Write it as $x = a$.

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

Find the horizontal asymptote of $f(x) = \frac{6x + 6}{2x^2 + 7}$.

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

Find the vertical asymptote of $f(x) = \frac{5x + 7}{x + 6}$.

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

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

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

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

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

The graph of $f(x) = \frac{x^2 + 14x + 45}{x + 5}$ has a hole at $x = -5$. Find the y-coordinate of the hole.

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

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

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

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

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

Find the slant asymptote of $f(x) = \frac{x^2 - 5x + 7}{x - 2}$.

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

The graph of $f(x) = \frac{x^2 + 4x - 12}{x + 6}$ has a hole at $x = -6$. Find the y-coordinate of the hole.

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

Find the vertical asymptotes of $f(x) = \frac{x + 8}{x^2 - 1}$.

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

The graph of $f(x) = \frac{x^2 - 4x - 12}{x + 2}$ has a hole at $x = -2$. Find the y-coordinate of the hole.

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 · Medium

The answers online

1. $x = -4$	**2.** $y = -1$	**3.** $x = -2$ or $x = 1$
4. -7	**5.** $x = -5$	**6.** $y = 0$
7. $y = 0$	**8.** $y = 0$	**9.** $x = -4$
10. $y = -\frac{1}{3}$	**11.** $x = 4$ or $x = 5$	**12.** -10
13. $x = 8$	**14.** $y = 0$	**15.** $x = -6$
16. $y = 0$	**17.** $x = -2$ or $x = 3$	**18.** 4
19. $y = x + 8$	**20.** $y = \frac{1}{4}$	**21.** $y = x - 3$
22. -8	**23.** $x = -1$ or $x = 1$	**24.** -8