MODULE 3

LESSON 3

QUIZ

1. Question. Which of the following are the x-intercepts of the graph of the function
$$f(x) = \frac{x^3 + 4x^2 + x - 6}{x^2 + 3x + 2}?$$

   A. $(1, 0)$, $(-3, 0)$ and $(-2, 0)$

   B. $(1, 0)$ and $(-3, 0)$

   C. $(0, -1)$ and $(0, -2)$

   D. $(1, 0)$, $(-3, 0)$, (-2,0) and $(-1, 0)$

   Go to answer 1

2. Question. Which of the following is the y-intercepts of the graph of the function
$$f(x) = \frac{x^3 + 4x^2 + x - 6}{x^2 + 3x + 2}?$$

   A. $(0, 1)$ and $(0, -3)$

   B. -3

   C. $(-3, 0)$

   D. $(0, -1)$ and $(0, -2)$

   Go to answer 2

3. Question. In which of the following intervals of its domain does

$$f(x) = \frac{x^3 + 4x^2 + x - 6}{x^2 + 3x + 2}$$

approach the negative infinity (i.e. $\lim_{x \to a} f(x) = -\infty$ for some a in the interval)?

A. only $(-2, -1)$

B. only $(-3, -2)$

C. only $(-1, 1)$

D. $(-2, -1)$ and $(-1, 1)$

Go to answer 3

4. Question. Which of the following are the vertical asymptotes of the rational function

$$f(x) = \frac{x^3 + 4x^2 + x - 6}{x^2 + 3x + 2}?$$

A. $x = -2$ and $x = -1$

B. only $x = -2$

C. only $x = -1$

D. $y = 1$

Go to answer 4

5. Question. Which of the following is the horizontal asymptote of the rational function

$$f(x) = \frac{5x^2 + x - 6}{x^2 + 3x + 2}?$$

A. $x = 1$

B. $y = 0$

C. $y = \frac{1}{5}$

D. $y = 5$

Go to answer 5

6. Question. Which of the following is the horizontal asymptote of the rational function

$$f(x) = \frac{2x^2 - 3x + 4}{3x^2 + 4x^2 - 5x + 1}?$$

A. $y = \frac{2}{3}$

B. $y = 0$

C. $x = \frac{2}{3}$

D. $x = 0$

Go to answer 6

ANSWERS

1. Answer to Question 1 is "B".

   Go back 1

2. Answer to Question 2 is "C".

   Go back 2

3. Answer to Question 3 is "C".

   Go back 3

4. Answer to Question 4 is "C".

   Go back 4

5. Answer to Question 5 is "D".

   Go back 5

6. Answer to Question 6 is "B".

   Go back 6