MODULE 3
LESSON 4
QUIZ

1. Question. Which of the following rational functions is negative on the set

$$
(-\infty,-3) \cup(-1,1) ?
$$

A. $f(x)=\frac{x+3}{1-x^{2}}$
B. $f(x)=\frac{x^{2}+x-6}{x^{2}-1}$
C. $f(x)=\frac{x^{2}+2 x-3}{x^{2}+3 x+2}$
D. $f(x)=\frac{x^{3}+4 x^{2}+x-6}{x^{2}+3 x+2}$

Go to answer 1
2. Question. On which of the following sets is the rational function

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

positive?
A. only $(-\infty,-3)$ and $(1, \infty)$
B. only $(-3,-2),(-2,-1)$ and $(1, \infty)$
C. only $(-2,-1)$ and $(1, \infty)$
D. only $(-3,-2)$ and $(1, \infty)$

Go to answer 2
3. Question. In which of the following intervals of its domain does

$$
f(x)=\frac{x+3}{x^{2}+x-12}
$$

approach the negative infinity (i.e. $\lim _{x \rightarrow a} f(x)=-\infty$ for some $a$ in the interval)?
A. only $(-3,3)$
B. only $(-4,-3)$
C. $(-\infty,-4)$ and $(-3,3)$
D. $(-4,-3)$ and $(3, \infty)$

Go to answer 3
4. Question. Which of the following is the oblique asymptote of the rational function

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

A. $y=x+1$
B. $y=x+3$
C. $y=x-1$
D. $y=x$

Go to answer 4
5. Question. For which of the following rational functions the line $y=2 x+$ 1 is an oblique asymptote and the line $x=2$ is a vertical asymptote?
A. $f(x)=\frac{2 x^{2}-4 x+5}{x-2}$
B. $f(x)=\frac{2 x^{2}-3 x+3}{x^{2}-1}$
C. $f(x)=\frac{2 x^{2}-3 x+3}{x-2}$
D. $f(x)=\frac{2 x+1}{x-2}$

Go to answer 5

## ANSWERS

1. Answer to Question 1 is " D ".

Go back 1
2. Answer to Question 2 is " B ". Go back 2
3. Answer to Question 3 is "C". Go back 3
4. Answer to Question 4 is " A ". Go back 4
5. Answer to Question 5 is "C". Go back 5

