Practice Quiz

1. $\dfrac{5x^3 - x^3 + 6}{x - 4}$

2. $\dfrac{2x^3 + x - 5}{x - 1}$

3. $\dfrac{2x^4 - 5x^3 + 10x + 4}{x^2 - 3}$

4. $\dfrac{5x^3 - 36}{x^2 - 12}$

5. $\dfrac{7x^4 + x^2 + 12}{x^2 + 2}$

6. Find the vertical asymptotes for the following questions.

   a. $\dfrac{2x^3 + x^2 + x + 3}{2x + 6}$

   b. $\dfrac{x^4 + 3x^2 - 12}{x^2 - 9}$

   c. $\dfrac{5x^2 + 3}{x^3 - 8}$

7. Find the slant asymptotes equations for the following questions.

a. $\dfrac{x^2 - 5x + 8}{x - 3}$

b. $\dfrac{x^2 - 3x - 4}{x - 2}$

c. $\dfrac{5x^3 - 2x}{x^2 + 1}$

Answer:

1. $\dfrac{4x^3+6}{x-4}$

2. $\dfrac{x\left(2x^2+1\right)-5}{x-1}$

3. $\dfrac{x\left((2x-5)x^2+10\right)+4}{x^2-3}$

4. $\dfrac{5x^3-36}{x^2-12}$

5. $\dfrac{7x^4+x^2+12}{x^2+2}$

6a. -3

6b. 3 or -3

6c. 2

7a. $y=x-2$

7b. $y=x-1$

7c. $y=5x$