BRITISH COLUMBIA PRE-CALCULUS 12 (MPREC12) · UNIT D · 10 QUESTIONS

Sequences, Series and Rational Functions — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 The vertical asymptote of $y = \frac{2}{x - 7}$ is

- **A** x = 7
- **B** x = -7
- **C** y = 7
- **D** y = 0

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2 The horizontal asymptote of $y = \frac{5x - 1}{2x + 3}$ is

- **A** $y = 0$
- **B** $y = 5$
- **C** $y = 2$
- **D** $y = \frac{5}{2}$

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3 Simplified, $\frac{x^2 - 25}{x + 5}$ equals (for x ne -5)

- **A** $x + 25$
- **B** $x + 5$
- **C** $x - 25$
- **D** $x - 5$

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4 The solution of $\frac{3}{x} = 6$ is

- **A** $x = \frac{1}{2}$
- **B** $x = 2$
- **C** $x = 18$
- **D** $x = 3$

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5 The graph shows $y = \frac{1}{x + 3}$, with points A and B. The vertical asymptote of this graph is

- **A** $y = 3$
- **B** $x = 3$
- **C** $y = 0$
- **D** $x = -3$

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6 The domain of $y = \frac{1}{x - 8}$ excludes

A x = 0

B x = 8

C x = -8

D x = 1

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7 The y-intercept of $y = \frac{x + 6}{x - 2}$ is

A -3

B 3

C 6

D -6

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8 **The sum of the first 5 terms of 1, 3, 9, … is**

ANSWER _____

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9 **An infinite geometric series with ratio $\frac{3}{4}$ and first term 8**

A sums to 0

B diverges

C converges

D is arithmetic

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10 The solution of $\frac{x + 1}{x - 2} = 3$ is

A $x = \frac{7}{2}$

B $x = 3$

C $x = 2$

D $x = 5$

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ANSWER KEY

1. A
2. D
3. D
4. A
5. D
6. B
7. A
8. 121
9. C
10. A

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