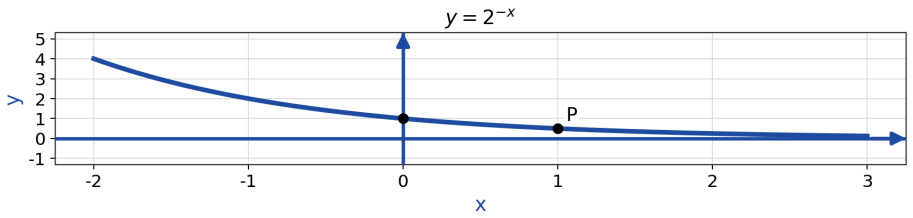
NORTHWEST TERRITORIES FOUNDATIONS OF MATHEMATICS 12 (MFOM-12) · UNIT B · 10 QUESTIONS

Advanced Functions and Regression — 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 graph shows $y = 2^{-x}$. The value of y at the point P is**



- **A** 0.25
- **B** 0.5
- **C** 1
- **D** 2

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2 **A line of best fit is y = 3x - 2. The predicted value of y when x = 7 is _____.**

ANSWER _____

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3 **A correlation coefficient of 0.05 shows**

- A a strong positive correlation
- B a strong negative correlation
- C almost no linear correlation
- D a perfect negative correlation

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4 **A quadratic model is $y = 2x^2 + 1$. The predicted value when $x = 3$ is ____.**

ANSWER _____

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5 **If $\log_2 x = 6$, then the value of x is ____.**

ANSWER _____

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6 **An amount of 100 dollars grows by 5 percent per year, compounded. After 2 years, the amount, in dollars, is ____.**

ANSWER _____

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7 **The midline of y = 3 + 2 sin x is**

A y = 0

B y = 2

C y = 3

D y = 5

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8 **The degree of $f(x) = 5x^3 - x^2 + 4$ is**

- **A** 2
- **B** 3
- **C** 4
- **D** 5

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9 **For a line of best fit with a negative slope, as x increases, y tends to**

- **A** increase
- **B** decrease
- **C** stay the same
- **D** reach zero at once

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10 **The parabola $y = x^2 - 2x$ crosses the x-axis at**

- **A** $x = 0$ and $x = 2$
- **B** $x = 0$ and $x = -2$
- **C** $x = 1$ only
- **D** $x = -1$ and $x = 1$

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ANSWER KEY

1. B
2. 19
3. C
4. 19
5. 64
6. 110.25
7. C
8. B
9. B
10. A

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