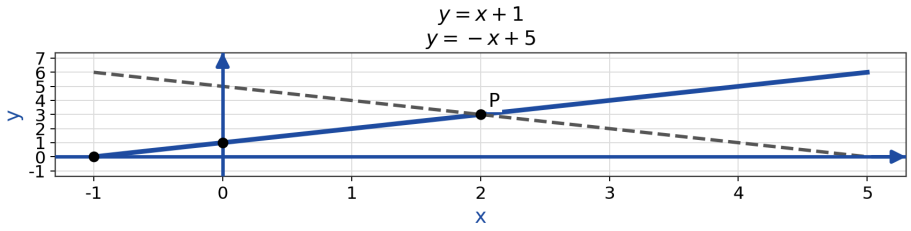
NORTHWEST TERRITORIES FOUNDATIONS OF MATHEMATICS AND PRE-CALCULUS 10 (MFMP-10) · UNIT D · 25 QUESTIONS

Linear Systems, Trigonometry and Measurement — 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 the lines y = x + 1 and y = -x + 5. The solution of the system formed by the two lines is**



A (3, 2)

B (2, 3)

C (-2, 3)

D (2, -3)

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Flag a mistake

2 **Solve the system y = 2x - 1, 3x + y = 14. The solution is**

A (3, 5)

B (5, 3)

C (2, 3)

D (3, 7)

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3 **Solve the system 2x + y = 11, x - y = 1. The solution is**

A (3, 5)

B (5, 1)

C (4, 3)

D (3, 4)

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4 **A concert sells adult tickets for 15 dollars and student tickets for 9 dollars. 50 tickets were sold for a total of 570 dollars. The number of adult tickets sold was ____.**

ANSWER _____

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5 **A jar holds loonies and toonies. There are 20 coins worth 34 dollars in total. The number of toonies in the jar is ____.**

ANSWER _____

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6 **The sum of two numbers is 91 and their difference is 17. The larger number is ____.**

ANSWER _____

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7 **Solve the system 2x + 3y = 17, x - y = 1. The value of y in the solution is ____.**

ANSWER _____

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8 **The lines y = 2x + 1 and y = 2x - 5 are parallel. The system formed by the two lines has**

A Exactly one solution

B No solution

C Infinitely many solutions

D Two solutions

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9 **In the triangle, AB = 4, AC = 3, and BC = 5, with a right angle at A. The value of sin B is**

A $\frac{3}{}$

B $\frac{4}{}$

C $\frac{3}{}$

D $\frac{4}{}$

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10 **In the triangle, AB = 12, AC = 5, and BC = 13, with a right angle at A. The value of cos B is**

- A 5
- B 12
- C 5
- D 13

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11 **In the triangle, AB = 15, AC = 8, and BC = 17, with a right angle at A. The value of tan B is**

- A 15
- B 8
- C 8
- D 15

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12 In a right triangle, an acute angle has tangent 1. The angle, in degrees, is

- A 30
- B 60
- C 45
- D 90

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13 In a right triangle, the side opposite an acute angle is 6 and the hypotenuse is 12. The angle, in degrees, is

- A 60
- B 30
- C 45
- D 90

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14 **An observer stands 40 metres from a building. The angle of elevation to the top of the building is 45 degrees. The height of the building, in metres, is ____.**

ANSWER _____

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15 **From the top of a 30 metre cliff, the angle of depression to a boat is 45 degrees. The horizontal distance from the cliff to the boat, in metres, is ____.**

ANSWER _____

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16 **In a right triangle, the tangent of an acute angle is the ratio of**

A The opposite side to the adjacent side

B The adjacent side to the opposite side

C The opposite side to the hypotenuse

D The hypotenuse to the adjacent side

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17 **Using 1 foot = 12 inches and 1 inch = 2.54 cm, the length of 5 feet, in centimetres, is ____.**

ANSWER _____

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18 **The length of 3.5 kilometres, in metres, is ____.**

ANSWER _____

Understand It with Pulse | Flag a mistake

19 **The length of 36 inches, in feet, is ____.**

ANSWER _____

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20 **The surface area of a cube with side length 4 cm, in cm², is ____.**

ANSWER _____

Understand It with Pulse | Flag a mistake

21 **The volume of a rectangular prism 6 cm long, 4 cm wide, and 3 cm high, in cm³, is ____.**

ANSWER _____

Understand It with Pulse | Flag a mistake

22 **The surface area of a rectangular prism 5 cm long, 3 cm wide, and 2 cm high, in cm², is ____.**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 **Using π = 3.14, the volume of a sphere with radius 3 cm, in cm³, is closest to**

A 113.04

B 75.36

C 254.34

D 50.24

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24 Using π = 3.14, the surface area of a cylinder with radius 3 cm and height 5 cm, in cm², is closest to

- **A** 150.72
- **B** 94.20
- **C** 188.40
- **D** 56.52

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25 Using 1 mile = 1.609 km, the length of 10 miles, in kilometres, is closest to

- **A** 6.21
- **B** 16.09
- **C** 10.00
- **D** 26.09

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ANSWER KEY

1. B
2. A
3. C
4. 20
5. 14
6. 54
7. 3
8. B
9. C
10. B
11. C
12. C
13. B
14. 40
15. 30
16. A
17. 152.4
18. 3500
19. 3
20. 96
21. 72
22. 62
23. A
24. A
25. B

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