ARIZONA PRECALCULUS · UNIT 3 · 25 QUESTIONS

Analytic Geometry and Conics — 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 center of $(x - 2)^2 + (y + 1)^2 = 25$ is**



A (2, 1)

B (2, -1)

C (-2, -1)

D (-2, 1)

Understand It with Pulse

Flag a mistake

2 **The radius of $(x - 2)^2 + (y + 1)^2 = 25$ is**

A 25

B 5

C 2

D 10

Understand It with Pulse | Flag a mistake

3 For $x^2 = 16y$, the focus is



A (-4, 0)

B (4, 0)

C (0, -4)

D (0, 4)

Understand It with Pulse | Flag a mistake

4 For $x^2 = 16y$, the directrix is

- **A** $y = -4$
- **B** $x = 4$
- **C** $y = 4$
- **D** $x = -4$

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5 For $\frac{x^2}{25} + \frac{y^2}{9} = 1$, the major axis length is

- **A** 5
- **B** 10
- **C** 3
- **D** 6

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6 For $\frac{x^2}{25} + \frac{y^2}{9} = 1$, the foci are



A (± 5, 0)

B (± 3, 0)

C (0, ± 4)

D (± 4, 0)

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7 For $\frac{x^2}{16} - \frac{y^2}{9} = 1$, the vertices are

- **A** $(0, \pm 4)$
- **B** $(\pm 5, 0)$
- **C** $(\pm 3, 0)$
- **D** $(\pm 4, 0)$

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8 For $\frac{x^2}{16} - \frac{y^2}{9} = 1$, the asymptotes are

- **A** $y = \pm \frac{3}{5}x$
- **B** $y = \pm \frac{3}{4}x$
- **C** $y = \pm \frac{5}{4}x$
- **D** $y = \pm \frac{4}{3}x$

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9 The vertex of $(y - 2)^2 = 12(x + 1)$ is

- A (1, -2)
- B (1, 2)
- C (-1, -2)
- D (-1, 2)

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10 For $(y - 2)^2 = 12(x + 1)$, the focus is

- A (-4, 2)
- B (2, 2)
- C (-1, -1)
- D (-1, 5)

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11 **For $(y - 2)^2 = 12(x + 1)$, the directrix is**

A $y = 5$

B $y = -1$

C $x = -4$

D $x = 2$

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12 The circle $x^2 + y^2 - 6x + 4y - 12 = 0$ has center



A (-3, -2)

B (3, -2)

C (3, 2)

D (-3, 2)

Understand It with Pulse | Flag a mistake

13 The circle $x^2 + y^2 - 6x + 4y - 12 = 0$ has radius

- **A** 5
- **B** 12
- **C** 25
- **D** 3

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14 For $\frac{y^2}{36} + \frac{x^2}{16} = 1$, the foci are

- **A** $(\pm 2\sqrt{5}, 0)$
- **B** $(0, \pm 2\sqrt{5})$
- **C** $(\pm 4, 0)$
- **D** $(0, \pm 6)$

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15 For $\frac{y^2}{36} + \frac{x^2}{16} = 1$, the minor axis length is

- A 6
- B 8
- C 4
- D 12

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16 For $\frac{y^2}{9} - \frac{x^2}{4} = 1$, the vertices are

- A (± 3, 0)
- B (± 2, 0)
- C (0, ± 3)
- D (0, ± 2)

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17 For $\frac{y^2}{9} - \frac{x^2}{4} = 1$, the asymptotes are

A $y = \pm \frac{3}{2}x$

B $y = \pm \frac{2}{3}x$

C $y = \pm \frac{5}{3}x$

D $y = \pm \frac{3}{5}x$

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18 The eccentricity of $\frac{x^2}{25} + \frac{y^2}{9} = 1$ is



A 1

B $\frac{3}{5}$

C $\frac{5}{4}$

D $\frac{4}{5}$

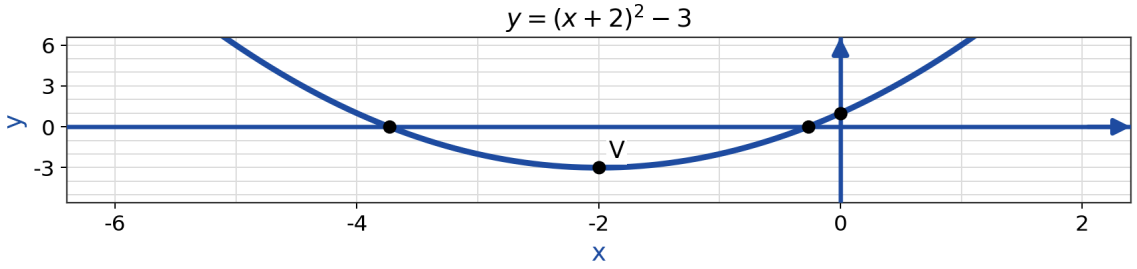
Understand It with Pulse | Flag a mistake

19 **A parabola with vertex (0, 0) and focus (0, 3) has equation**

- **A** $x^2 = 3y$
- **B** $x^2 = 12y$
- **C** $y^2 = 12x$
- **D** $y^2 = 3x$

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20 **The graph shows $y = (x + 2)^2 - 3$. The vertex is**



- **A** (2, 3)
- **B** (-2, 3)
- **C** (2, -3)
- **D** (-2, -3)

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21 **The distance between (1, 2) and (4, 6) is**

A 25

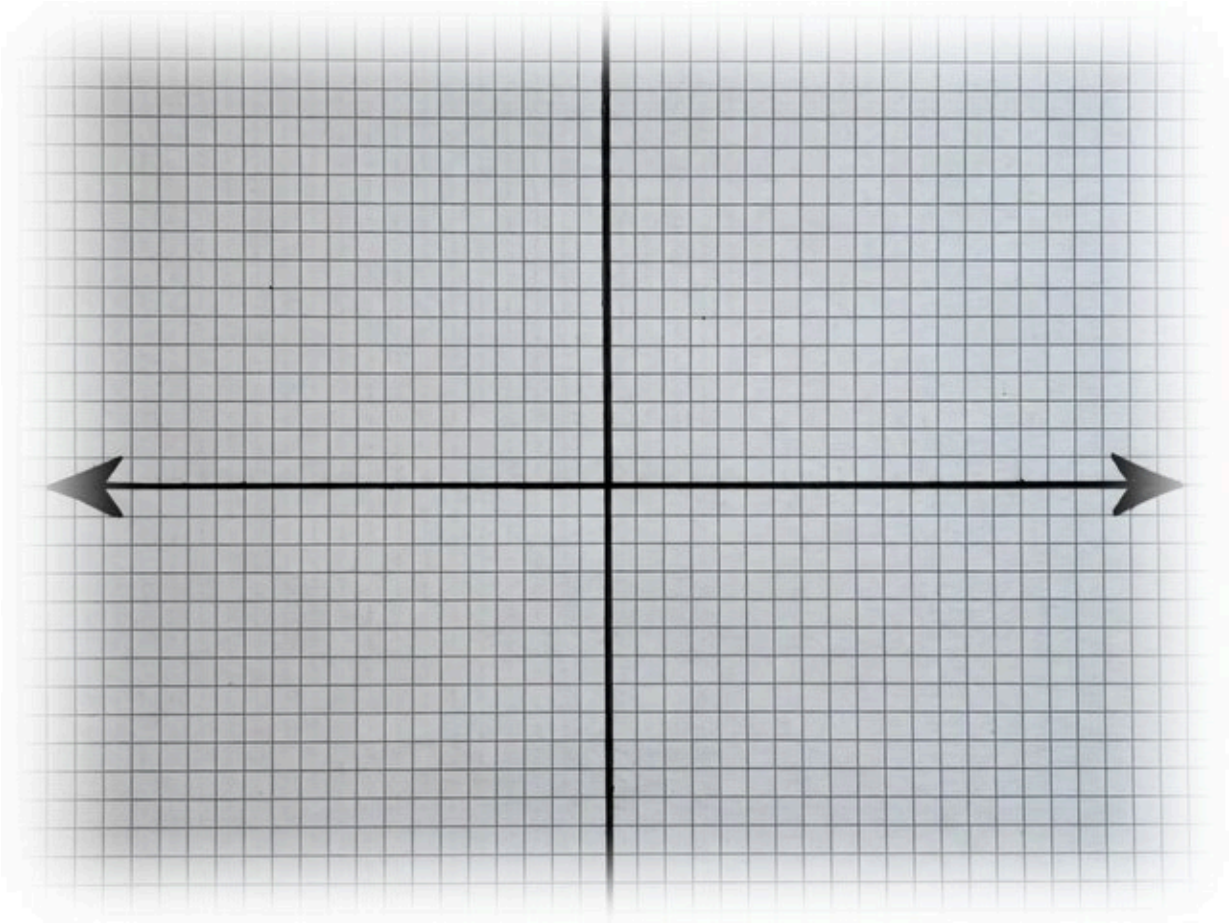
B 7

C 3

D 5

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22 **The midpoint of (2, 8) and (6, 4) is**



A (6, 4)

B (4, 4)

C (4, 6)

D (2, 6)

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23 The radius of $(x + 3)^2 + y^2 = 36$ is

ANSWER _____

Understand It with Pulse | Flag a mistake

24 The value of p for $x^2 = 20y$ is

ANSWER _____

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25 For $\frac{x^2}{49} + \frac{y^2}{25} = 1$, the major axis length is

ANSWER _____

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ANSWER KEY

1. B
2. B
3. D
4. A
5. B
6. D
7. D
8. B
9. D
10. B
11. C
12. B
13. A
14. B
15. B
16. C
17. A
18. D
19. B
20. D
21. D
22. C
23. 6
24. 5
25. 14

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