

17. If $f(x) = x^2 + 4$ and $g(x) = 5x - 1$, then $f(g(3)) =$

- a) 13 b) 18 c) 64 d) 182 e) 200
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18. If $x > 0$ and $y > 0$ then $\sqrt{27\sqrt{81x^3y^6}} =$

- a) $27x^2y\sqrt{y}$ b) $27x^2y\sqrt{3y}$ c) $9x^2y\sqrt{3y}$ d) $27x^2y\sqrt{3}$ e) $9x^4y^3$
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19. Which of the following are factors of $x^4 - 256$?

- I. $(x - 4)$ II. $(x + 4)$ III. $(x^2 + 16)$

- a) I only b) II only c) III only d) I and II only e) I, II, and III
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20. The graphs of the system of equations $\begin{cases} x + 3y = 1 \\ 2x - 6y = 2 \end{cases}$ consist of

- a) two distinct parallel lines
b) one line
c) two lines intersecting where $y = 1$
d) two lines intersecting where $x = 1$
e) two lines intersecting where $x = 2$
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21. The solution set for $x - 5 - \sqrt{16x} = 0$ consists of

- a) exactly one positive number
b) exactly one negative number
c) exactly one positive number and one negative number
d) exactly two positive numbers
e) exactly two negative numbers
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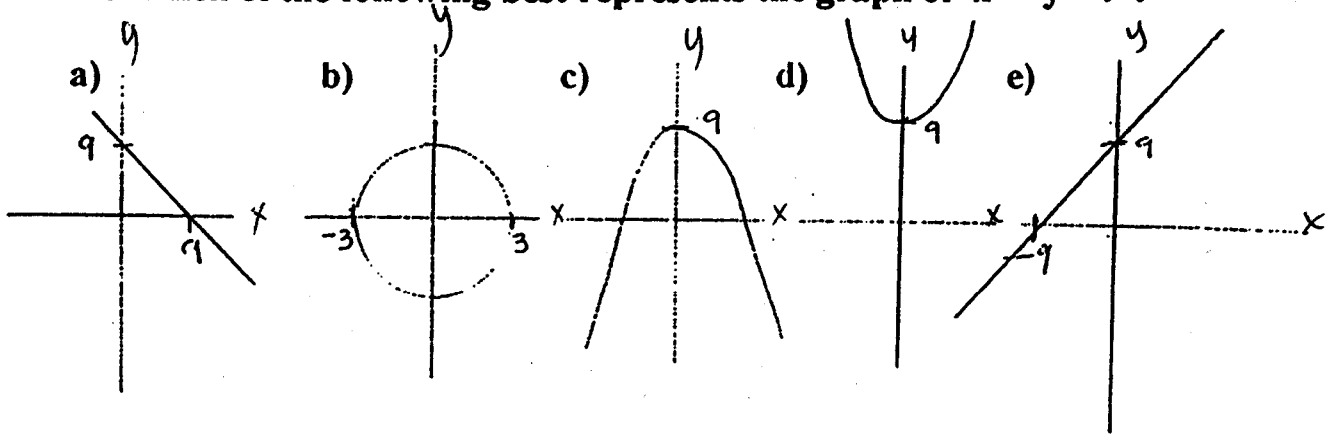
22. If $(x + k)^2 = k^2 + 2x + x^2$ then $k =$

- a) -2 b) -1 c) 0 d) 1 e) 2
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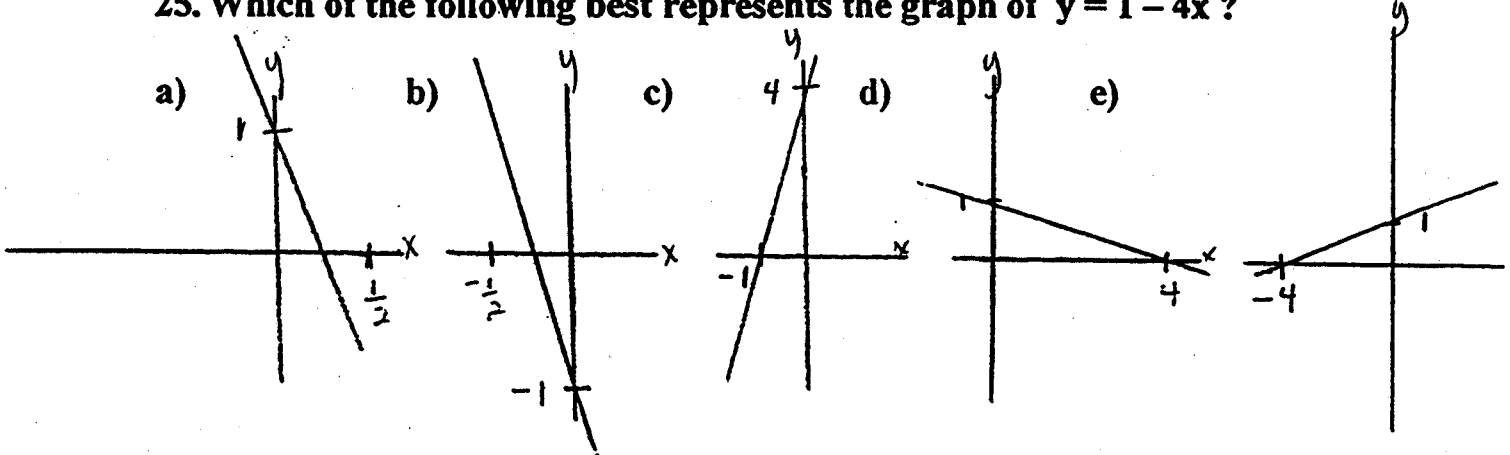
23. The distance between the points $(3, -4)$ and $(-2, 6)$ is

- a) 15 b) $\sqrt{5}$ c) $\sqrt{125}$ d) $\sqrt{29}$ e) $\sqrt{75}$

24. Which of the following best represents the graph of $x^2 + y = 9$?

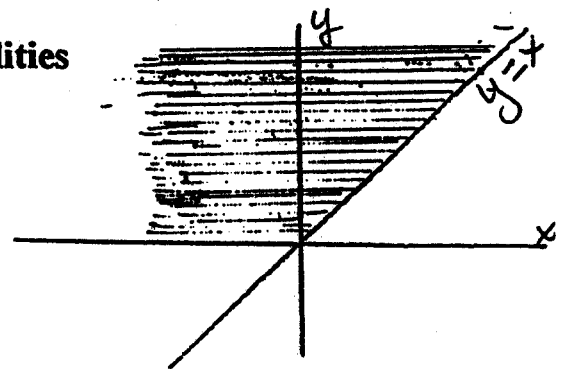


25. Which of the following best represents the graph of $y = 1 - 4x$?



26. The shaded region is described by the inequalities

- a) $x \geq y$ and $y \geq 0$
- b) $x \leq y$ and $y \geq 0$
- c) $x \geq y$ and $y \leq 0$
- d) $x \leq y$ and $y \leq 0$
- e) $x \leq y$ and $x \leq 0$



Answer Key:

1. d 2. c 3. b 4. b 5. b 6. a 7. b 8. a 9. a 10. e 11. a 12. c

13. c 14. e 15. d 16. d 17. e 18. c 19. e 20. d 21. a 22. d 23. c 24. c

25. a 26. b