

Name _____

Date _____

Solve.

1. $3x(8x + 1) = 0$

2. $(5k - 18)(7k - 4) = 0$

3. $-p(p + 2)(p - 3) = 0$

4. $5x(x + 4)(x - 9)(x - 2) = 0$

5. $-g(8 - g)(10g - 1) = 0$

6. $(25p^2 - 1)(p^2 + 25) = 0$

7. $(9r^2 + 1)(9r^2 - 1)$

8. $0 = 2 + 7y - 15y^2$

9. $0 = 42h^2 + h - 5$

10. $0 = 18y^2 + 51y + 8$

11. $36a^2 - 25a + 2 = 8a - 5$

12. $9k^2 + 5k + 1 = -25k - 24$

13. $8(2x^2 + 3x - 2) = 4x(3x + 7) - 16$

14. $121 = (m + 6)^2$

15. $0 = (3w + 2)^2 - 9$

16. $(x - 3)(x - 4) = 2$

17. $-4 = (x + 2)(x + 7)$

18. $4y + 23 = (3y + 5)(y + 3)$

19. Find a positive number whose square is 12 more than the number itself.

20. Find a negative number whose square is 2 more than the number itself.

21. The sum of two numbers is 19. The sum of their squares is 193. Find the numbers.
22. The sum of two numbers is 3. The sum of their squares is 89. What are the numbers?
23. The difference of two numbers is 6. The sum of their squares is 116. Find the numbers.
24. A positive number is one-half of another number. The sum of the numbers is 28 less than the square of the smaller number. What are the numbers?
25. When the square of a number is subtracted from 11 times the number, the difference is 18. Find the number.
26. 22 less than the square of a positive number is the same as 9 times the number. What is the number?

Answer List

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|----------------------------------|---------------------------------|---------------------------------|
| 1. $0, -\frac{1}{8}$ | 2. $\frac{18}{5}, \frac{4}{7}$ | 3. $0, -2, 3$ |
| 4. $0, -4, 9, 2$ | 5. $0, 8, tf110$ | 6. $\pm\frac{1}{5}$ |
| 7. $\pm\frac{1}{3}$ | 8. $\frac{2}{3}, -\frac{1}{5}$ | 9. $\frac{1}{3}, -\frac{5}{14}$ |
| 10. $-\frac{8}{3}, -\frac{1}{6}$ | 11. $\frac{7}{12}, \frac{1}{3}$ | 12. $-\frac{5}{3}$ |
| 13. $1, 0$ | 14. $5, -17$ | 15. $\frac{1}{3}, -\frac{5}{3}$ |
| 16. $2, 5$ | 17. $-3, -6$ | 18. $-4, \frac{2}{3}$ |
| 19. 4 | 20. -1 | 21. $7, 12$ |
| 22. $8, -5$ | 23. $4, 10$ | 24. $7, 14$ |
| 25. 9 | 26. 11 | |

Catalog List

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|----------------|----------------|----------------|
| 1. ALG JA 54 | 2. ALG JA 70 | 3. ALG JA 73 |
| 4. ALG JA 80 | 5. ALG JA 82 | 6. ALG JA 99 |
| 7. ALG JA 100 | 8. ALG JB 182 | 9. ALG JB 200 |
| 10. ALG JB 210 | 11. ALG JC 67 | 12. ALG JC 69 |
| 13. ALG JC 95 | 14. ALG JC 101 | 15. ALG JC 103 |
| 16. ALG JC 105 | 17. ALG JC 107 | 18. ALG JC 124 |
| 19. ALG JF 1 | 20. ALG JF 3 | 21. ALG JF 5 |
| 22. ALG JF 7 | 23. ALG JF 9 | 24. ALG JF 11 |
| 25. ALG JF 13 | 26. ALG JF 16 | |