

10-4 Skills Practice***Solving Quadratic Equations by Using the Quadratic Formula***

Solve each equation by using the Quadratic Formula. Round to the nearest tenth if necessary.

1. $u^2 - 49 = 0$

2. $n^2 - n - 20 = 0$

3. $s^2 - 5s - 36 = 0$

4. $b^2 + 11b + 30 = 0$

5. $c^2 - 7c = -3$

6. $p^2 + 4p = -1$

7. $a^2 - 9a + 22 = 0$

8. $x^2 + 6x + 3 = 0$

9. $2x^2 + 5x - 7 = 0$

10. $2h^2 - 3h = -1$

11. $2p^2 + 5p + 4 = 0$

12. $2g^2 + 7g = 9$

13. $3t^2 + 2t - 3 = 0$

14. $3x^2 - 7x - 6 = 0$

ALL WORK on looseleaf.

Make sure the quadratic is in standard form before starting.

Then find the discriminant. If it is negative, stop.

Otherwise, continue and solve using the quadratic formula.

"Use the force Luke" -- Yoda

Mr. C.

State the value of the discriminant for each equation. Then determine the number of real roots of the equation.

15. $q^2 + 4q + 3 = 0$

16. $m^2 + 2m + 1 = 0$

17. $a^2 - 4a + 10 = 0$

18. $w^2 - 6w + 7 = 0$

19. $z^2 - 2z - 7 = 0$

20. $y^2 - 10y + 25 = 0$

21. $2d^2 + 5d - 8 = 0$

22. $2s^2 + 6s + 12 = 0$

23. $2u^2 - 4u + 10 = 0$

24. $3h^2 + 7h + 3 = 0$

Note:

d is positive, there are two real roots or solutions.

d is zero, there are two real roots or solutions but they are the same number so you can say there is only one solution.

d is negative, there are no real roots or solutions.

Additionally, if d is positive AND a perfect square, the quadratic can be factored using the "magic number" method.

Mr. C.