

Algebra 2 Readiness Test

This placement test can help you determine if your student is ready for HSLDA Online Academy's [Algebra 2](#) course. If you find that your student needs improvement in algebra, we recommend our [Algebra 1](#) course instead.

All of HSLDA Online Academy's courses have live, weekly class sessions taught by qualified instructors. View our [full list of courses here](#).

Directions:

Separate the answer key from the rest of the pages (the answer key is on the last page). Your student should work independently and without using a calculator. Once your student is finished, grade the test using the answer key. If your student correctly answers 20 or more of the following questions, then he/she is likely ready for Algebra 2. The ultimate decision rests with you as the parent. Any final placement decision should also take into account the student's performance in Algebra 1. A strong performance (*i.e.*, a final grade of B or better) in a solid Algebra 1 curriculum will better prepare students for Algebra 2.

Test

Evaluate each expression below:

1. $z - (y \div 3 - 1)$ when $y = 3$, and $z = 7$
2. $12k - h^2$ when $h = 2$, and $k = 3$

Simplify each expression below:

3. $1 + 4(2 - 3k)$
4. $(x - 3)(6x - 2)$

5. $(7k - 3)(k^2 - 2k + 7)$

6. $\sqrt{5} \cdot \sqrt{10}$

7. $(7x^2)(x^4)(-5x)$

8. $\frac{2r-4}{r-2}$

9. $-2(-6x - 9) - 4(x + 9)$

10. $(2v)^2 \cdot 2v^2$

11. $\frac{5n}{30m} + \frac{2m+4n}{30m}$

Solve each equation below:

12. $-9x + 1 = -80$

13. $-6 = \frac{n}{2} - 10$

14. $-4k + 2(5k - 6) = -3k - 39$

15. Solve the equation for x.

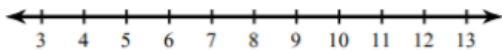
$$-3x + 2c = -3$$

16. Translate the problem into an equation and solve.

A passenger plane made a trip to Las Vegas and back. On the trip there it flew 432 mph and on the return trip it went 480 mph. How long did the trip there take if the return trip took nine hours?

17. Solve the inequality and graph its solution.

$$2x + 4 \geq 24$$

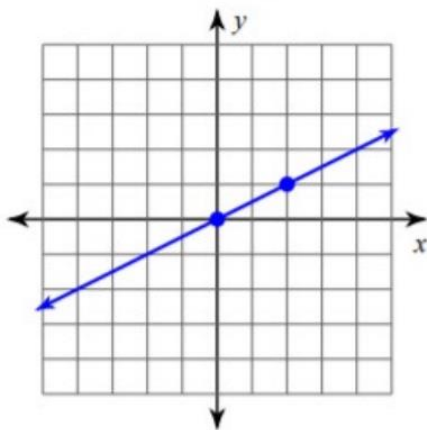


18. Factor: $n^2 + 4n - 12$

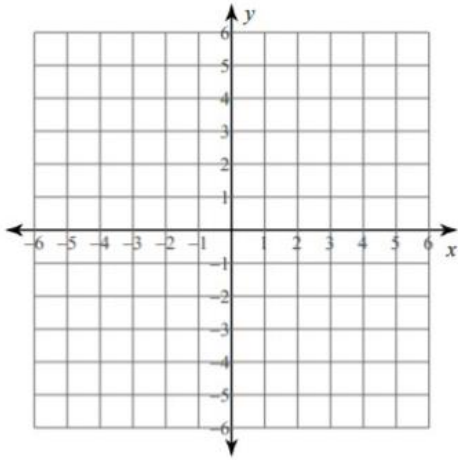
19. Solve the quadratic equation. $n^2 + 3n - 12 = 6$

20. Solve the quadratic equation. $3r^2 - 16r - 7 = 5$

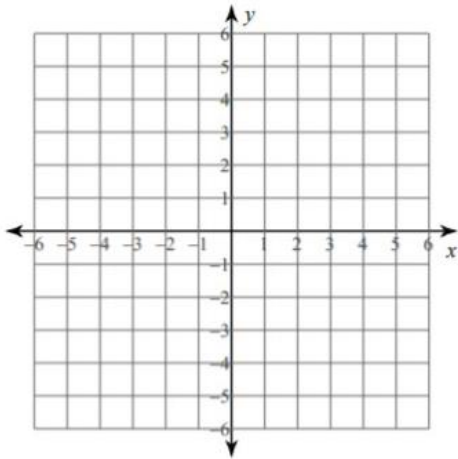
21. Find the slope of the line.



22. Graph the equation on the coordinate plane. $y = -6x + 3$



23. Graph the equation on the coordinate plane. $2x + y = 4$



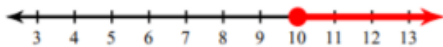
24. Solve the system of equations for x and y .

$$x - y = 11$$

$$2x + y = 19$$

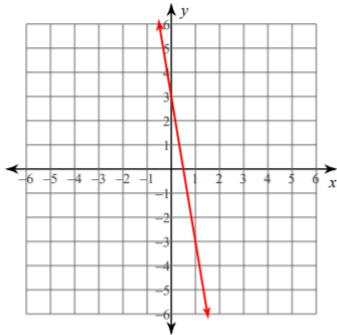
Answer Key

- 7
- 32
- $9 - 12k$
- $6x^2 - 20x + 6$
- $7k^3 - 17k^2 + 55k - 21$
- $5\sqrt{2}$
- $-35x^7$
- 2
- $8x - 18$
- $8v^4$
- $\frac{9n+2m}{30m}$
- $x = 9$
- $n = 8$
- $k = -3$
- $x = \frac{2c+3}{3}$
- 10 hours
- $x \geq 10$

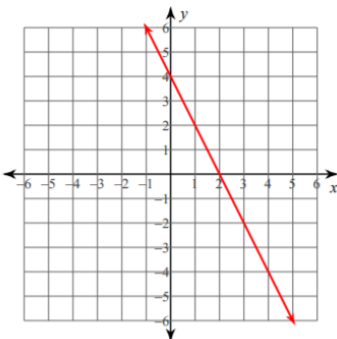


- $(n - 2)(n + 6)$
- $n = \{3, -6\}$
- $n = \{-2/3, 6\}$
- slope = $1/2$

22.



23.



24. $x = 10$, $y = -1$