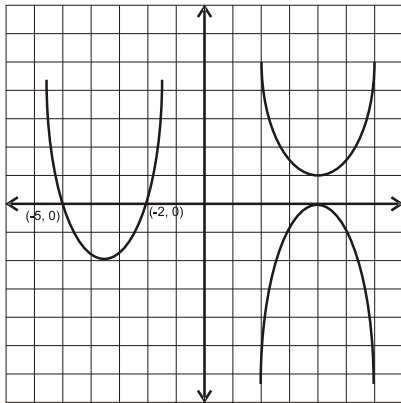


1. Solve for x $\sqrt{2x-3} = x+1$

2. Find the exact value of $\cos 210^\circ$.

3. Label each parabola below based on the nature of the roots of its quadratic equation. (e. g. real, rational, equal)



4. What is the domain of the function

$$y = \frac{x+2}{\sqrt{x+4}} ?$$

5. Evaluate $\sum_{1}^3 2x^3 - 1$

6. Rationalize the denominator: $\frac{6}{3-\sqrt{3}}$

7. Find the solution set for $|4x-2| = 12$

8. Find the quadratic equation whose roots are $6+i$ and $6-i$

9. Jessica averages 3 hits for every 5 at bats she gets. What is the probability that she will get at least 2 hits in her next 3 at bats?

10. Reduce: $\frac{x^2 + x - 6}{x^2 - 9}$

11. If $\cot x < 0$ and $\sec x > 0$, in which quadrant does x lie?

12. Simplify: $3i^2 + i(4i - i^3)$

13. Express 330° in radian measure

14. In a circle a central angle of 60° intercepts an arc whose length is $\frac{2\pi}{3}$ radians. Find the length of the radius.

15. For a study 500 people were chosen to take a general knowledge test. If the mean score was 77 and the standard deviation was 3, how many students scored less than 74 on the test?

16. Find AB in the diagram below where $BC = 4$ and $CD = 12$.

