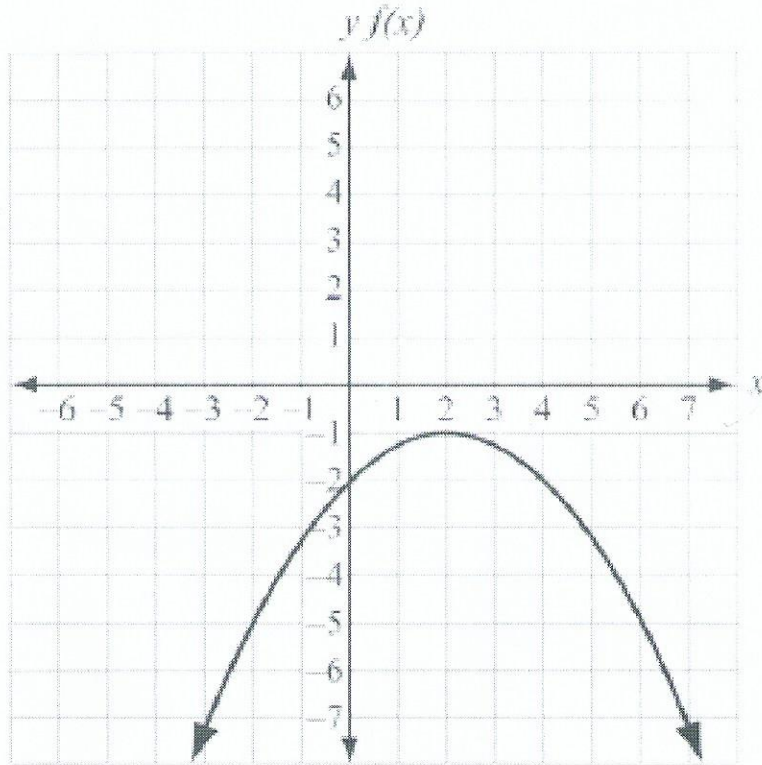


4. Use this graph of the function $g(x)$ to answer the question.



Which statement about the real solutions of $g(x)$ is true?

- A. $g(x)$ has no real solutions. *because it doesn't cross x-axis*
- B. $g(x)$ has exactly one real solution.
- C. $g(x)$ has two real solutions that are rational.
- D. $g(x)$ has two real solutions that are irrational.

5.

Which expression is equivalent to $\frac{12-5i}{2-i}$?

A. $\frac{19}{3} - \frac{22}{3}i$

B. $\frac{29}{3} + \frac{2}{3}i$

C. $\frac{19}{5} - \frac{22}{5}i$

D. $\frac{29}{5} + \frac{2}{5}i$

use conjugate to rationalize denominator

$\frac{12-5i}{2-i} \cdot \frac{2+i}{2+i}$ foil or box

$\frac{24+12i-10i-5i^2}{4+2i-2i-i^2}$

Remember $i^2 = -1$

so $\frac{24+12i-10i-5(-1)}{4+2i-2i-(-1)} \rightarrow \frac{24+12i-10i+5}{4+2i-2i+1}$ combine like terms

$\frac{29+2i}{5} \rightarrow \frac{29}{5} + \frac{2}{5}i$