

No Calculators Allowed

1. Let $f(x) = 3\sec(x) - 2$ and $g(x) = 4$. In the xy -plane, what are the x -coordinates of the points of intersection of the graphs of f and g for $0 \leq x < 2\pi$?

2. Let $h(x) = 5 - 2\csc x$ and $k(x) = 7$. In the xy -plane, what are the x -coordinates of the points of intersection of the graphs of h and k for $0 \leq x < 2\pi$?

3. Let $m(x) = 2 + \sqrt{3}\cot x$ and $p(x) = 1$. In the xy -plane, what are the x -coordinates of the points of intersection of the graphs of m and p for $0 \leq x < 2\pi$?

4. Let $f(x) = 3\csc^2(x) - 1$ and $g(x) = 3$. In the xy -plane, what are the x -coordinates of the points of intersection of the graphs of f and g for $0 \leq x < 2\pi$?

5. Let $h(x) = 5 + \sqrt{3}\sec x$ and $k(x) = 3$. In the xy -plane, what are the x -coordinates of the points of intersection of the graphs of h and k for $0 \leq x < 2\pi$?

6. Let $m(x) = 3 + 5\sec^2 x$ and $p(x) = 13$. In the xy -plane, what are the x -coordinates of the points of intersection of the graphs of m and p for $0 \leq x < 2\pi$?

Calculators Required



7. Let $f(x) = 5.1 + 2.3 \csc(0.4x - 2)$. In the xy -plane, what are the x -coordinates of the points of where $f(x) = 2$ for $0 \leq x < 2\pi$?



8. Let $f(x) = 3.1 - 1.2 \sec\left(\frac{\pi x}{6}\right)$. In the xy -plane, what are the x -coordinates of the points of where $f(x) = -3$ for $0 \leq x < 2\pi$?



9. Let $f(x) = 3.5 \cot(0.51x)$. In the xy -plane, what are the x -coordinates of the zeros of $f(x)$ for $0 \leq x < 2\pi$?



10. Let $f(x) = 6.2 - 4.1 \csc\left(\frac{\pi x}{4}\right)$. In the xy -plane, what are the x -coordinates of the points of where $f(x) = 1$ for $0 \leq x < \pi$?



11. Let $f(x) = 2.1 + 2.7 \sec(3 - 0.4x)$. In the xy -plane, what are the x -coordinates of the points of where $f(x) = -5$ for $0 \leq x < 2\pi$?