

2010 Alpha Individual Test Key

1. $2x + h + 5$
2. $y = -4 \sin\left(\frac{1}{3}x\right)$
3. $x = 7, 1$
4. $\frac{2\pi}{3}$
5. $(2, -2)$
6. $\sec^2 x$
7. 740
8. $-\frac{\sqrt{34}}{5}$
9. $f^{-1}(x) = \frac{3x}{x-1}$
10. $\frac{\pi}{6}, \frac{5\pi}{6}, \frac{3\pi}{2}$
11. 25
12. $0, \frac{1}{2}, \frac{3 \pm \sqrt{5}}{2}$
13. $\frac{(x-5)^2}{9} + \frac{y^2}{4} = 1$
14. $2A^2 - 1$
15. \$700
16. $\frac{\sqrt{15}}{8}$
17. 9
18. 32
19. $x = -\frac{5}{9}$
20. $5 - 5i\sqrt{3}$