

Fill in the table. Simplify the functions $f(x) = x$ and $f(x) = x^2$ so that they are in the form $y = mx + b$ and $y = a(x - h)^2 + k$. Do your rough work (where necessary) on a separate page.

| $f(x)$ | x | x^2 | \sqrt{x} | $\frac{1}{x}$ |
|---------------------------------|----------|-------------------|----------------------|------------------------|
| 1. $5f(a)$ | | | | |
| 2. $-f(a)$ | | | | |
| 3. $f(a) + 4$ | | | | |
| 4. $f(a) - 6$ | | | | |
| 5. $f(a + 2)$ | | | | |
| 6. $f(a - 1)$ | | | | |
| 7. $f(3a)$ | | | | |
| 8. $f(-a)$ | | | | |
| 9. $f(-2a)$ | | | | |
| 10. $f\left(\frac{a}{2}\right)$ | | | | |
| 11. $f[3(a - 1)]$ | | | | |
| 12. $f(-3a) + 6$ | | | | |
| 13. $-2f(a - 6) + 4$ | | | | |
| 14. $5f[4(a - 1)] - 3$ | | | | |
| 15. | $3a - 6$ | | | |
| 16. | | $3a^2 - 4$ | | |
| 17. | | | $-\sqrt{3 - a}$ | |
| 18. | | | | $\frac{1}{a + 2} - 1$ |
| 19. | | $-5(a - 2)^2 + 7$ | | |
| 20. | | | $3\sqrt{4a - 8} - 2$ | |
| 21. | | | | $\frac{-3}{a - 5} + 2$ |

Answers from #15-21 may vary.