U-Substitution 1st Day of Practice

Evaluate each indefinite integral. Use the provided substitution.

1) $\int (x^3 + 4)^5 \cdot 3x^2 \, dx; \; u = x^3 + 4$

2) $\int (4x^5 - 1)^5 \cdot 20x^4 \, dx; \; u = 4x^5 - 1$

3) $\int 5x^4 (x^5 + 4)^5 \, dx; \; u = x^5 + 4$

4) $\int 10x^4 (2x^5 + 3)^3 \, dx; \; u = 2x^5 + 3$

5) $\int 18x^2(3x^3 - 4)^4\, dx;\ u = 3x^3 - 4$

6) $\int 24x^3(3x^4 + 4)^3\, dx;\ u = 3x^4 + 4$

7) $\int 40x^3(5x^4 - 2)^3\, dx;\ u = 5x^4 - 2$

8) $\int -20x^4\cos(x^5 - 2)\, dx;\ u = x^5 - 2$

9) $\int 12x^3\sin(3x^4 + 1)\, dx;\ u = 3x^4 + 1$

10) $\int 10x^4\sin(2x^5 + 3)\, dx;\ u = 2x^5 + 3$