

Math Sheet

Name _____ Score _____ Teacher _____ Date _____

Integration by Parts

Choose u and dv, apply the parts identity, continue any polynomial reduction, and include + C.

1.

$$\int \frac{3}{2} \cdot (-1+x) \cdot \sin(-3+x) dx$$

$$u = -1+x$$

$$dv = \frac{3}{2} \cdot \sin(-3+x) \cdot dx$$

4.

$$\int -1 \cdot \arctan(1-3 \cdot x) dx$$

$$u = \arctan(1-3 \cdot x)$$

$$dv = -1 \cdot dx$$

2.

$$\int 2 \cdot (3-3 \cdot x-2 \cdot x^2) \cdot \cos(-3+2 \cdot x) dx$$

$$u = 3-3 \cdot x-2 \cdot x^2$$

$$dv = 2 \cdot \cos(-3+2 \cdot x) \cdot dx$$

5.

$$\int \frac{3}{2} \cdot \arcsin(-2+2 \cdot x) dx$$

$$u = \arcsin(-2+2 \cdot x)$$

$$dv = \frac{3}{2} \cdot dx$$

3.

$$\int (2-x)^0 \cdot \ln(2-x) dx$$

$$u = \ln(2-x)$$

$$dv = (2-x)^0 \cdot dx$$

6.

$$\int -1 \cdot (x^2-2 \cdot x^3) \cdot e^{-3+x} dx$$

$$u = x^2-2 \cdot x^3$$

$$dv = -1 \cdot e^{-3+x} \cdot dx$$
