Name _____ Score _____ Teacher _____ Date _____

Trapezoid and Simpson Numerical Integration

Apply the selected composite rule to equally spaced data. Report numerical results as approximations and show weights explicitly.

1. **Use composite trapezoid rule with n = 4 for table x: 1, 3, 5, 7, 9; f(x): 4, 12, 28, 52, 84.**

2. **Use composite Simpson rule with n = 4 for f(x) = 3x^2 + 0x + 1 on [2, 10].**

Name _____ Score _____ Teacher _____ Date _____

Trapezoid and Simpson Numerical Integration

Apply the selected composite rule to equally spaced data. Report numerical results as approximations and show weights explicitly.

3. **Use composite trapezoid rule with n = 4 for f(x) = 1x^2 + 0x + 1 on [0, 4].**

4. **Use composite Simpson rule with n = 4 for table x: 0, 1, 2, 3, 4; f(x): 5, 8, 17, 32, 53.**

State assumptions, domains, units, and approximation methods.

Name _____ Score _____ Teacher _____ Date _____

Trapezoid and Simpson Numerical Integration

Apply the selected composite rule to equally spaced data. Report numerical results as approximations and show weights explicitly.

5. **Use composite trapezoid rule with n = 4 for table x: 1, 2, 3, 4, 5; f(x): 9, 18, 31, 48, 69.**

6. **Use composite Simpson rule with n = 4 for f(x) = 2x^2 - 1x + 4 on [0, 8].**

State assumptions, domains, units, and approximation methods.