

Intro. to Calculus  
Summer 2019  
Homework 1 - 1.1, 1.2

Name: \_\_\_\_\_

Due: Friday, June 28

Total: \_\_\_\_\_ / 32

1. Evaluate:

/4

(a)  $2^{-2}$

(b)  $-2^{-2}$

(c)  $(-2)^2$

(d)  $-2^2$

2. Simplify:

/3

(a)  $\frac{1}{3^{-2}}$

(b)  $\frac{2}{x^{-2}}$

(c)  $\frac{3^0}{x^2}$

3. Simplify:

/6

(a)  $x^2x^5$

(b)  $(2x^2)(4x)$

(c)  $3x^2x^5$

(d)  $\frac{3x}{x}$

(e)  $\frac{3x^2}{6x^4}$

(f)  $\frac{x^5x^3}{x^2}$

4. Simplify:

/6

(a)  $(3^2)^2$

(b)  $(x^{-2})^4$

(c)  $(5^3)^0$

(d)  $(3x)^3$

(e)  $(xy)^4$

(f)  $(2x^4y^2)^4$

5. Simplify:

/3

(a)  $\left(\frac{2}{x}\right)^3$

(b)  $\left(\frac{x^3}{3}\right)^{-2}$

(c)  $\left(\frac{2}{3}\right)^3$

6. List the terms, coefficients, and degree of the polynomial  $8x^4 + 3x^2 + 7x + 6$

/2

- Terms:
- Coefficients:
- Degree:

7. Simplify  $4x^2 + 3x + 1 + 2x^2 + 7x + 4$ .

/2

8. Simplify  $4x^2 + 3x + 1 - (2x^2 + 7x + 4)$

/2

9. Multiply  $(2x + 1)(7x^2 + x + 1)$

/2

10. Multiply  $(2x + 3)(x + 1)$

/2