Math 1311

**Homework 10 (Section 5.3- Section 5.6)**

Record your answers to all the problems in the EMCF titled **“ Homework 10”** .

1. Section 5.3 Skill Building Exercise S-8

a)

b)

c)

d)

2. Section 5.3 Skill Building Exercise S-10

a)

b)

c)

d)

3. Section 5.3 Exercise 4a.

a)

b)

c)

d)

4. Model the following data with a power formula.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 | 5 |
|  | 1 | 8 | 27 | 64 | 125 |

a)

b)

c)

d)

5. Model the following data with a power formula.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 0.3 | 1.3 | 2.2 | 3.3 | 4.1 |
|  | 5.6 | 2 | 0.92 | 0.77 | 0.51 |

a)

b)

c)

d)

6. Section 5.3 Skill Building Exercise S-12

a)

b)

c)

d)

7. Section 5.4 Skill Building Exercise S-2

a)

b)

c)

d)

8. Use a formula to express as a function of if and .

a)

b)

c)

d)

9. If and , find

a)

b)

c)

d)

10. If and , find

a)

b)

c)

d)

11. Find the limiting value of

a) 7

b) 6

c) 5

d) 4

12*.* Section 5.4 Skill Building Exercise S-4

a)

b)

c)

d)

13. Section 5.4 Skill Building Exercise S-6

a)

b)

c)

d)

14. Find the limiting value of

a)

b)

c)

d)

15. Use the quadratic formula to solve 

a)

b)

c)

d)

16. Use the quadratic formula to solve .

a) -1.16 and

b) -2.16 and

c) -3.16 and

d) -4.16 and

17. Use quadratic regression to find a model for the following data set.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 1 | 3 | 5 | 6 | 8 |
|  | 2.2 | 9.7 | 27.7 | 35.2 | 62.1 |

a)

b)

c)

d)

18. Find the poles of

a) x= 2 and x=1

b) x= 3 and x=1

c) x= -2 and x=-1

d) x= -3 and x=-1

19. Section 5.6 Skill Building Exercise S-16

1. Not a polynomial function
2. Degree is 0.5

20. Section 5.6 Skill Building Exercise S-18

1. Not a polynomial function
2. Degree is 3.2