**4.5 Extra Practice**

**Expand each expression.**

1. 
2. 
3. 
4. 
5. 

**Condense each expression into a single logarithm.**

1. 
2. 
3. 
4. 
5. 

**For the given values, rewrite each expression in terms of *x, y*, and *z.***

|  |  |  |
| --- | --- | --- |
|  |  |  |

1. 
2. 
3. 
4. 
5. 
6. 

**For the given values, rewrite each expression in terms of *a, b*, and *c.***

|  |  |  |
| --- | --- | --- |
|  |  |  |

1. 
2. 
3. 
4. 

**ANSWERS**

1. 
2. 
3. 
4. 
5. 
6. 
7. 
8. 
9. 
10. Can’t be condensed; 
11. x+z
12. y-x OR 2x
13. z-x
14. y-x+1
15. 2x+y OR 5x
16. z+1
17. b+c
18. b-c
19. a-c+1
20. a+b OR 2c+1