

Homework 1.1 1, 4, 5, 11, 16, 17, 22, 30, 31, 32

1. a) true
b) false
c) false
d) ~~true~~ false
e) ~~false~~ true
f) ~~true~~ false

11. E) $x = x + 1$
 $0 = 1$ empty set

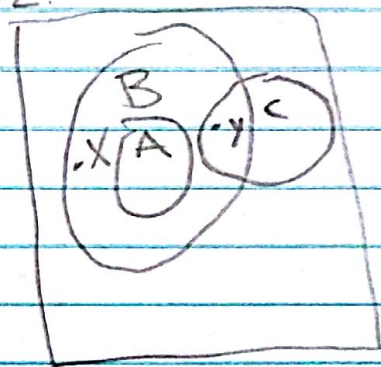
4. ~~$\{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13\}$~~
 ~~$\{1, 2, 3, 3\}$~~

- ~~a) true~~
b) true
~~c) false~~
d) true
e) True

5. a) ~~true~~ false
b) true
c) False
d) True
e) False
f) False

17. a) C
b) C
c) \emptyset
d) C
e) \emptyset
f) C

32.



11. a) $x^2 - 1 = 0$
 $x^2 = 1$
 $x = \pm 1$ Real

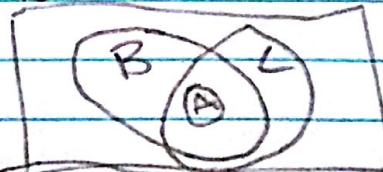
b) $x^2 + 1 = 0$
 $x^2 = -1$
 $x = \pm i$
empty set

c) $x^2 = -9$
 $x = \pm 3i$
empty set

d) $x^2 = 2x + 1$
 $x^2 - 2x - 1 = 0$
 $x = \frac{2 \pm \sqrt{4 + 4}}{2} = 1 \pm \sqrt{2}$
Real

- 22 a) False
b) true
c) False
d) true
e) true
f) false

30.



31.

