Master Maths 9 Worksheet 42
Venn Diagrams

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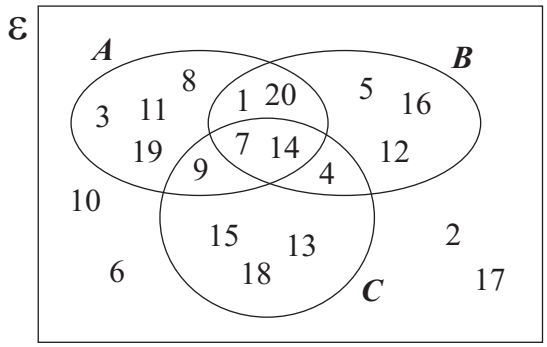
Name: _____

1. List the elements in the universal set and all other sets in the following Venn diagram.



ε =	
A =	
B =	
C =	

2. (a) Construct a Venn diagram representing the following sets.

ε = {1, 2, 3, 4, ...20}
X = {2, 3, 4, 9, 13, 14, 16, 17}
Y = {3, 5, 7, 11, 13, 15, 16, 19}
Z = {4, 5, 8, 12, 13, 15, 16, 17, 18}

(b) Use this Venn diagram to find the following sets.

(i) $X \cap Y$ (ii) $X \cap Z$ (iii) $X \cap Y \cap Z$

3. Use the information below to construct a Venn diagram showing the number of elements in all of the sections.

n(ε) = 20, n(*K*) = 9, n(*L*) = 9, n(*M*) = 12, n($K \cap L$) = 5, n($L \cap M$) = 5, n($K \cap M$) = 6, n($K \cap L \cap M$) = 2

4. There were 100 students in year 9 at a school.
33 wanted to study technology.
39 wanted to study graphics.
32 wanted to study art.
8 wanted to study graphics and art but not technology.
12 wanted to study technology and art.
5 wanted to study all three subjects.
15 wanted to study only technology.
Construct a Venn diagram representing this information completing all sections of the diagram.

How many students did not want to study any of these three subjects?