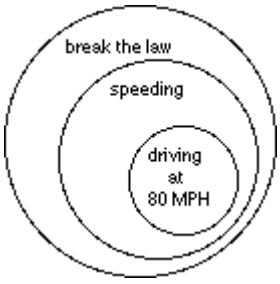
Transitive Reasoning

NAME _____

For questions 1-3, look at the picture and write two forms of the argument.

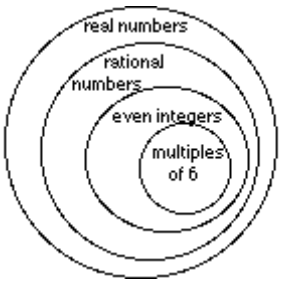
Example:



Premise:	Everyone who drives at 80 MPH is speeding.	$p \rightarrow q$:	If you drive at 80 MPH, then you are speeding.
Premise:	All who speed break the law.	p:	If you speed then you break the law.
Conclusion:	Everyone who drives at 80 MPH breaks the law.	q:	If you drive at 80 MPH, then you break the law.

1.

2.



3.

For questions 4–5, draw the proper conclusion and give the corresponding diagram.

4. All rational numbers are real numbers. All real numbers are complex numbers. We can thus conclude that _____.

5. If you voted for Oregon's "Measure 16," then you support euthanasia. If you support euthanasia, then you believe in some form of doctor-assisted suicide. We can thus conclude that _____.

6. Saying that some elements of A are in B is the same as saying $A \cap B$. If $A \cap B$ and $B \cap C$, can you conclude that $A \cap C$? Draw a picture to show that this conclusion could be false.

7. Explain why the following argument is invalid. Draw the corresponding diagram.

Premise:	Some plastic toys are yellow.
Premise:	Some yellow toys are on the floor.
Conclusion:	Some plastic toys are on the floor.