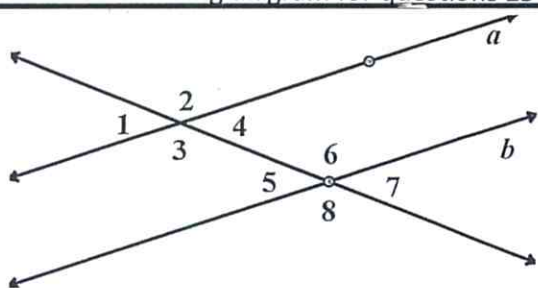Use the following diagram for questions 15 – 20. $a \parallel b$.

15. Name all the pairs of vertical angles.

16. Name all the pairs of same-side interior angles.

17. Name all the alternate interior angles.

18. Name all the corresponding angles.
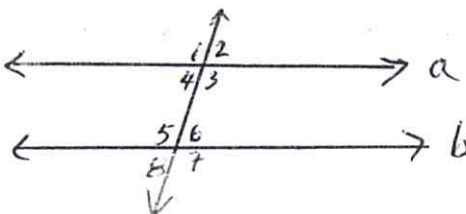
19. Name 4 linear pairs.

20. Which of the above types of angles are congruent?

Which of the above type are supplementary?

21. Complete the following proofs:

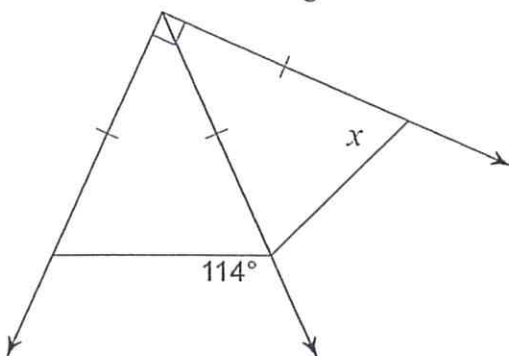a)   Given: $a \parallel b$

Prove: ∠1 and ∠8 are supplementary

b) Prove the following theorem: "If 2 parallel lines are intersected by a transversal, then alternate exterior ∠'s are ≅"

Given: a ∥ b

Prove: ∠2 ≅ ∠8

22. Solve for x in the diagram below.

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23. Select all the statements that are *true* for similar figures (dilations)
A) All the corresponding angles have the same ratio.
B) All the corresponding sides have the same ratio.
C) All the corresponding angles are congruent.
D) All the corresponding sides are congruent.