$\qquad$

## Show all work neatly.

For each pair of triangles, determine if they are similar. If they are similar, make a correct flowchart. If they are not similar, explain why they are not similar (make sure that you show your work).
1.

3.

2.

4.




6.

10.


In each question (1-12), the pair of triangles may be similar. Mark any angles that you KNOW to be congruent. If you know the triangles are similar, then correctly complete the similarity statement, and give the reason for the similarity (AA~, SAS~, or SSS~). If they are not, write "not similar" and explain why. Show any work necessary to help justify your choice.
1)

$\Delta U T S$ ~ $\qquad$
2)

$\triangle C B A \sim$ $\qquad$
4)

$\triangle J K L \sim$ $\qquad$
6)

$\Delta K L M \sim$ $\qquad$
7)

$\Delta T U V \sim$ $\qquad$
9)

$\triangle H G F \sim$ $\qquad$
10)

$\Delta F G H \sim$ $\qquad$
11)

$\triangle F E D \sim$ $\qquad$
12)

$\Delta T U V \sim$ $\qquad$
13)

$\triangle J K L \sim \triangle P Q R$
14)

16)

$\triangle P V W \sim \triangle P Q R$

In each question (17-20), the pair of triangles is similar. Write and solve equations to find the value of $x$. Show all work.
17)


19)

20)


