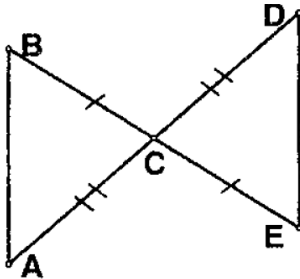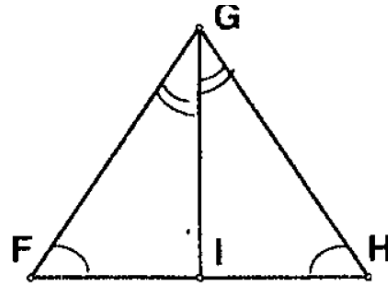*I would like to remind you that the homework should be done on a separate piece of paper. There is not enough space on this handout to show all work. **You must show all steps!***

**1.** State the rule that could be used to conclude that the triangles are congruent. Explain how you know:
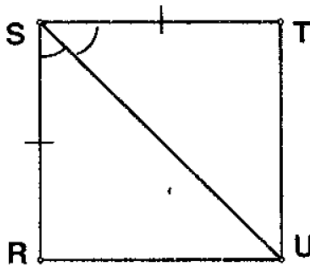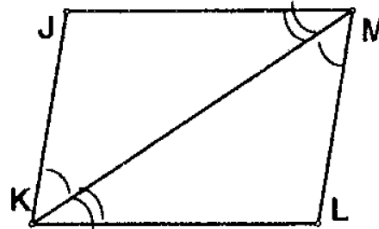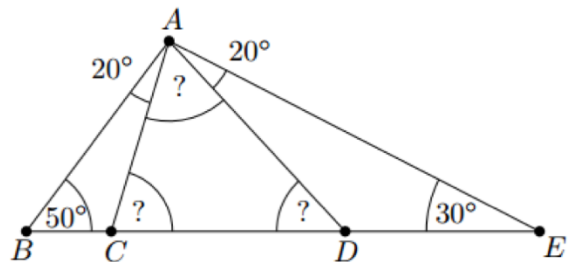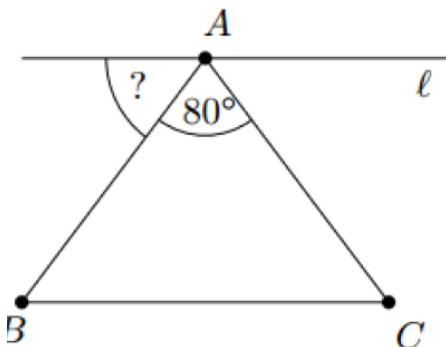
a)

b)

c)

d)

**2.** Find the missing angles. Show ALL work!

a) Line $l$ is parallel to BC and AB = BC

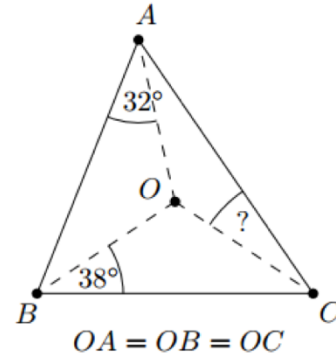b)

c)



ABCD
is a square.
$CE = CF$

d)



$OA = OB = OC$
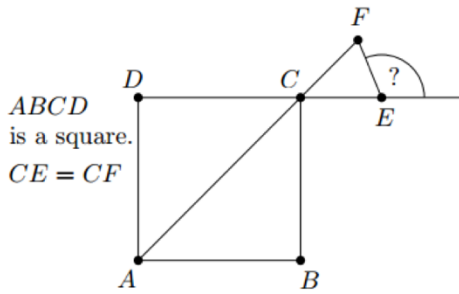
**3.** Solve each equation below. Show all steps

a) $0.2(x - 2) = 0.7(x + 3)$

b) $2(x + 3) - 3(x + 2) = 5 - 4(x + 1)$

c) $3 - 5(x - 1) = x - 2$

d) $11(y - 4) + 10(5 - 3y) - 3(4 - 3y) = -6$

**4.** Victoria gives $\frac{1}{2}$ of her marbles to Mischa, who gives $\frac{2}{3}$ of what he receives to Ivan, who gives $\frac{3}{4}$ of what she receives to Alexei. If each has a counting number of marbles, what is the fewest number of marbles that Victoria could have started with?



**5.** This morning Rishaan had 2 more action figures than Jememah, and Jememah had 8 more action figures than Shreyaan. Rishaan gave some of his action figures to Shreyaan, and now both Rishaan and Shreyaan have the same number of action figures. Jememah now has $N$ more action figures than Shreyaan does. What is the value of $N$?