

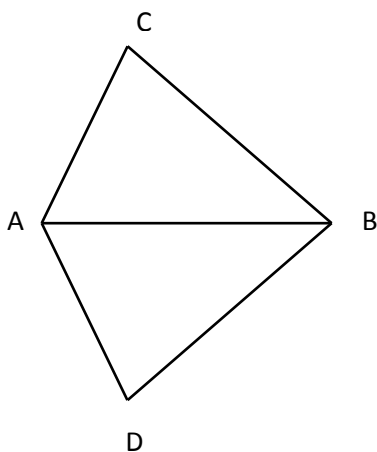
Name: _____

Points: _____

1. In the figure, $AC=AD$, $BC=BD$. $\angle CAB = x^\circ$, $\angle BAD = (3x - 120)^\circ$, $\angle ABD = 40^\circ$.

a) Write the congruence statement and give a reason (SAS, ASA, AAS or SSS Theorems).

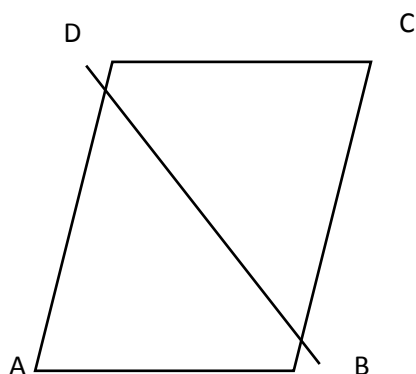
b) Find x , $\angle CAB$, $\angle ABC$, $\angle ACB$.



2. In the figure, $\angle ADB = \angle CBD$ and $\angle ABD = \angle CDB$. $AB=y+6$, $BC=3y$, $CD=2x-2$ and $AD=x+1$.

a) Write the congruence statement and give a reason (SAS, ASA, AAS or SSS Theorems).

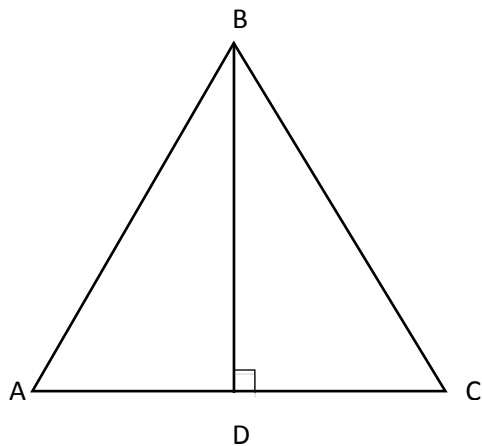
b) Find x , y , AB , BC , CD and AD .



3. In the figure on the next page, $\angle A = \angle C$. $AB = x^2 - 15$, $BC = 2x$.

a) Write the congruence statement and give a reason (SAS, ASA, AAS or SSS Theorems).

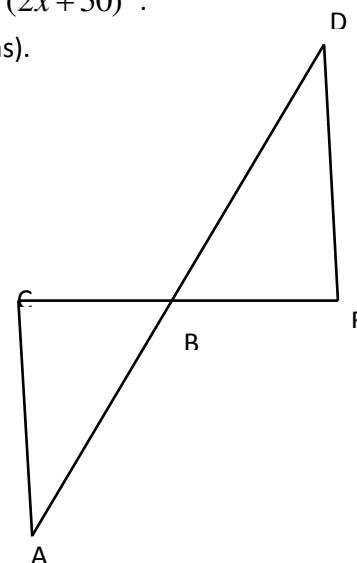
b) Find x , AB and BC .



4. In the figure, $AB=BD$ and $BC=BE$. $\angle A = 3x^\circ$, $\angle C = 3y^\circ$, $\angle D = (y + 30)^\circ$, $\angle E = (2x + 50)^\circ$.

a) Write the congruence statement and give a reason (SAS, ASA, AAS or SSS Theorems).

b) Find $x, y, \angle A, \angle C, \angle D, \angle E$.



5. AB and DC are parallel, $AB=CD$, $AE = 2y-x$, $EC = 2x+7$, $BE = x+2$, $ED = y-2x$. Solve for x and y . Find the lengths of AC and BD .

