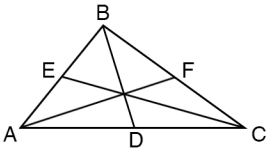
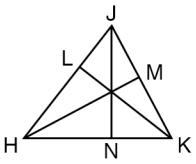
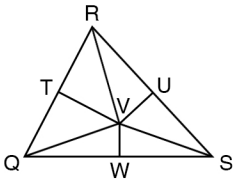
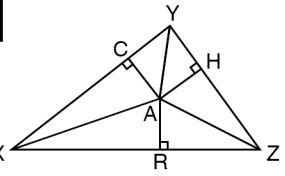
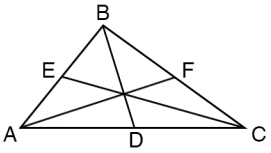
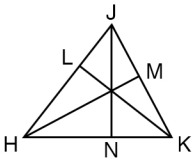
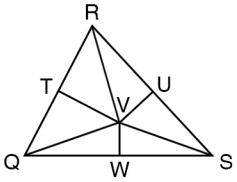
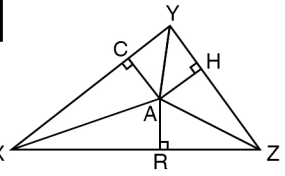
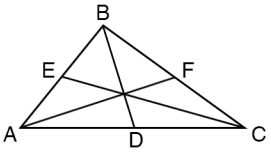
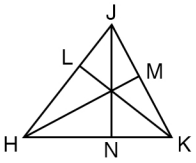
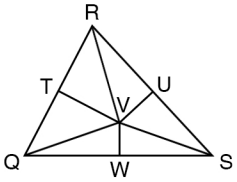
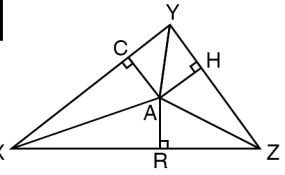
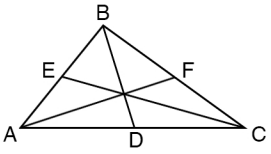
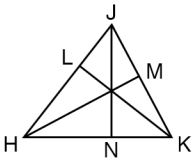
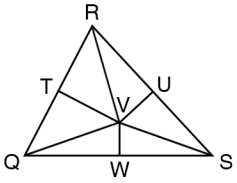
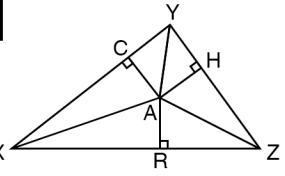
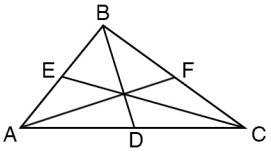
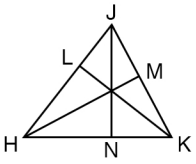
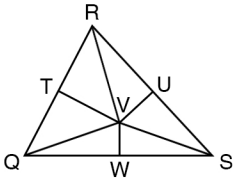
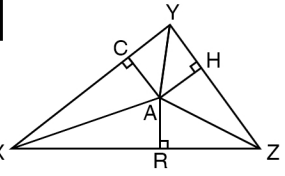
Special Triangle Segments and Points of Concurrency

Name: _____

1  $\overline{AF}$, $\overline{BD}$, and $\overline{CE}$ are medians. If these segments intersect at point G, then G is the _____.	**6**  $\overline{HM}$, $\overline{JN}$, and $\overline{LK}$ are altitudes. If these segments intersect at point P, then P is the _____.	**11**  $\overline{TV}$, $\overline{UV}$, and $\overline{WV}$ are perpendicular bisectors that intersect at point V, so V is the _____.	**16**  $\overline{XA}$, $\overline{YA}$, and $\overline{ZA}$ are angle bisectors that intersect at point A, so A is the _____.
2  $\overline{AF}$, $\overline{BD}$, and $\overline{CE}$ are medians that intersect at point G. If AG = 8 , then GF = ___ and AF = ___	**7**  $\overline{HM}$, $\overline{JN}$, and $\overline{LK}$ are altitudes that intersect at point P. If HL = 12 and LP = 5 , then HP = ___	**12**  $\overline{TV}$, $\overline{UV}$, and $\overline{WV}$ are perpendicular bisectors. If QV = 18 , then RV = ___ and SV = ___	**17**  $\overline{XA}$, $\overline{YA}$, and $\overline{ZA}$ are angle bisectors that intersect at A. If AC = 27 , then AR = ___ and AH = ___
3  $\overline{AF}$, $\overline{BD}$, and $\overline{CE}$ are medians that intersect at point G. If BF = 6 , then FC = ___ and BC = ___	**8**  $\overline{HM}$, $\overline{JN}$, and $\overline{LK}$ are altitudes that intersect at point P. If m∠MPK = 67° , then m∠PKM = ___	**13**  $\overline{TV}$, $\overline{UV}$, and $\overline{WV}$ are perpendicular bisectors. If VU = 9 and VR = 15 , then RU = ___	**18**  $\overline{XA}$, $\overline{YA}$, and $\overline{ZA}$ are angle bisectors that intersect at A. If AC = 9 and AX = 17 , then CX = _____
4  $\overline{AF}$, $\overline{BD}$, and $\overline{CE}$ are medians that intersect at point G. If EG = 2x - 1 and GC = 3x + 1 then x = ___ and EC = ___	**9**  $\overline{HM}$, $\overline{JN}$, and $\overline{LK}$ are altitudes that intersect at point P. If JM = x - 8, JP = x - 7, and PM = x - 9 , then x = ___	**14**  $\overline{TV}$, $\overline{UV}$, and $\overline{WV}$ are perpendicular bisectors. If QT = 5x - 19 and TR = 2x + 8 then x = ___ and QR = ___	**19**  $\overline{XA}$, $\overline{YA}$, and $\overline{ZA}$ are angle bisectors that intersect at A. If m∠CXA = x - 9 and m∠CXR = x + 10, then x = ___
5  $\overline{AF}$, $\overline{BD}$, and $\overline{CE}$ are medians that intersect at point G. If AE = 9 - 2x and EB = 8x - 16 then x = ___ and AB = ___	**10**  $\overline{HM}$, $\overline{JN}$, and $\overline{LK}$ are altitudes that intersect at point P. If m∠LPH = 2x + 2 and m∠PHL = x - 5 , then x = ___	**15**  $\overline{TV}$, $\overline{UV}$, and $\overline{WV}$ are perpendicular bisectors. If m∠WVQ = 10x + 1 and m∠VQW = 4x - 9, then x = ___	**20**  $\overline{XA}$, $\overline{YA}$, and $\overline{ZA}$ are angle bisectors that intersect at A. If XR = 63, AZ = 34, and RZ = 30, then XA = ___