Name _____

Block _____

Due Date _____

Midpoints, Bisectors, and Vertical Angles

1.

Given: B is midpoint of $\overline{AC}$

$AB = 5$

Prove: $BC = 5$

2.

Given: B is midpoint of $\overline{AC}$

$AB = 5$

Prove: $AC = 10$

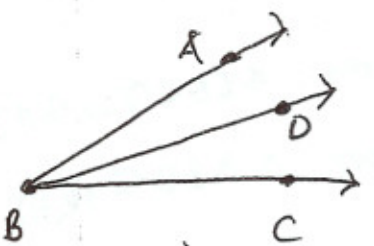
3.

Given: B is midpoint of $\overline{AC}$

$AC = 10$

Prove: $AB = 5$

4.

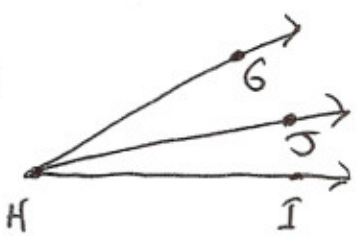


Given: $\overrightarrow{BD}$ bisects $\angle ABC$

$m\angle ABD = 30°$

Prove: $m\angle DBC = 30°$

5

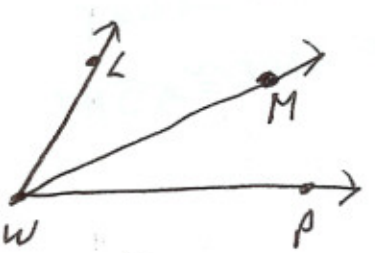


Given: $\overrightarrow{HJ}$ bisects $\angle GHI$

$m\angle GHJ = 20°$

Prove: $m\angle GHI = 40°$

6.

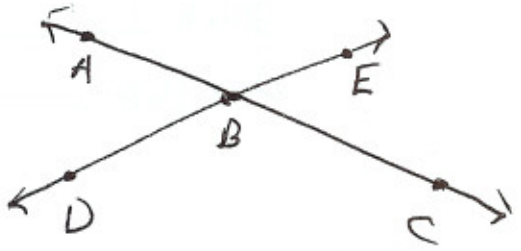


Given: $\overrightarrow{WM}$ bisects $\angle LWP$

$m\angle LWP = 60°$

Prove: $m\angle MWP = 60°$

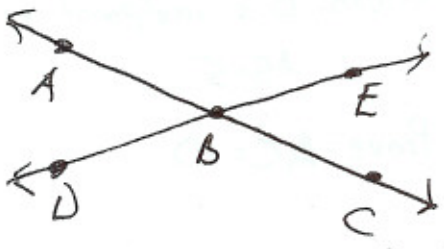
7.



Given: $m\angle ABE = 120°$

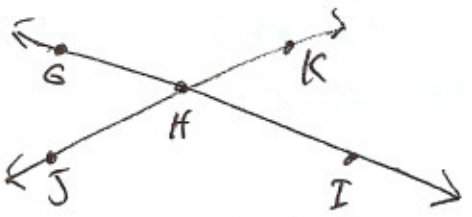
Prove: $m\angle DBC = 120°$

8.



Given: $\angle EBC \cong \triangle GHJ$

Prove: $\triangle ABD \cong \angle KHI$



6

Bonus

9. (Same picture as #8)

Given: $\angle EBC \cong \angle GHJ$

Prove: $\angle ABE \cong \angle JHI$