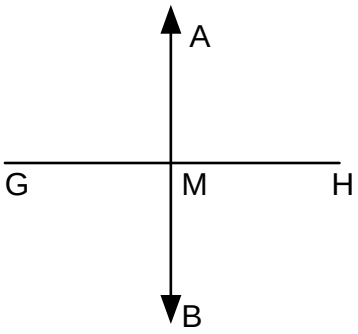
Unit 3 Bench Mark Review Geometry

G1.0 1. Identify the given properties: a. r + 8 = 8 + r b. r + 8 = r + 8

G1.0 2. Identify the given properties: a. If x = y and y = z - 6 then x = z - 6
b. If x = y and 4y = z - 9 then 4x = z - 9

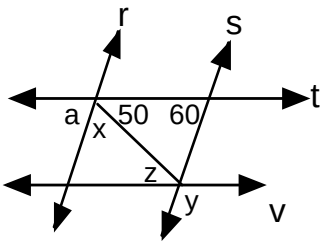
G1.0 3. Line AB is the perpendicular bisector of $\overline{GH}$.
Decide if each statement is true or false and tell why. a. $\angle AMG$ is a right angle.
b. M is the midpoint of $\overline{GH}$.
c. $m\angle GMB = 90°$



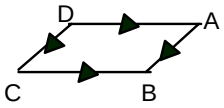
G1.0 4. Line AB is the perpendicular bisector of $\overline{GH}$.
Decide if each statement is true or false and tell why. a. $\overline{GM} \cong \overline{MH}$
b. $\overline{AM} \cong \overline{MB}$

G7.0 5. Given: $r \| s$ and t||v
a. Find $m\angle x$
b. Find $m\angle y$

G7.0. 6. Given: $r \| s$ and t||v
a. Find $m\angle a$
b. Find $m\angle z$



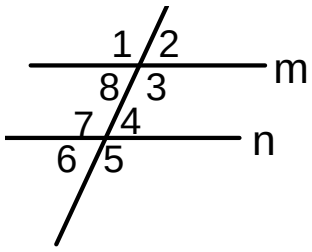
G7.0



7. $m\angle A = 50°$ then find $m\angle B$.
8. If $m\angle D = 105°$ then find $m\angle A$.

G7.0 9. Use the diagram at the right. If m || n then list all angles that are supplementary to angle 3.

G7.0 10. Use the diagram at the right. If m || n then list all angles that are supplementary to angle 8.



G7.0 11. Use the diagram at the right. If m || n and $m\angle 1 = 125°$ find $m\angle 4$.

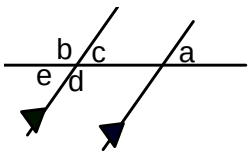
G7.0 12. Use the diagram at the right. If m || n and $m\angle 6 = 40°$ find $m\angle 3$.

G1.0 13. Give the definition of deductive reasoning.

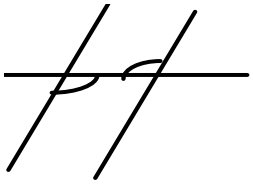
G1.0 14. Give the definition of inductive reasoning then compare it to deductive reasoning?

G7.0 15. Use the diagram at the right, list all angles that are a supplement to $\angle a$.

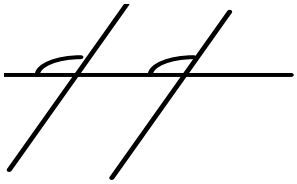
G7.0 16. Use the diagram at the right, list all angles that are congruent to $\angle a$ and their relationship.



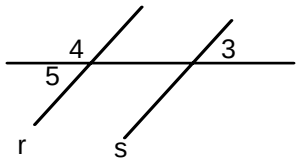
G7.0 17 Using the figure below which theorem guarantees that the lines are parallel?



G7.0 18 Using the figure below which theorem guarantees that the lines are parallel?



G7.0 19. Given: r || s
Prove: angle 3 and angle 4 are supplementary

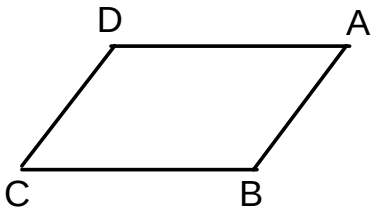


G7.0 20. $Given: \angle 1, \angle 2$ are complementary
$\angle 2, \angle 3$ are complementary

Prove: $\angle 1 \cong \angle 3$

G7.0 21. In the figure $\overline{AD} \| \overline{BC}$.
If $m\angle C = 3x + 40$ and
$m\angle D = x + 20$, find x.

G7.0 22. In the figure $\overline{AD} \| \overline{BC}$.
If $m\angle A = 5x + 80$ and
$m\angle B = 3x - 60$, find $m\angle A$.



G3.0 23. Give a counterexample to " All grapes are green".

G3.0 24. Give a counterexample to " If two angles are supplementary then they are a linear pair".

G17.0 25. If lines l_3 and l_4 are parallel what do we know about their slopes?

G17.0 26. If lines l_1 and l_2 are perpendicular what do we know about their slopes?

G16.0 27. Draw an obtuse angle and construct the angle bisector.

G16.0 28. Draw a 6 inch segment and construct the perpendicular bisector.

G16.0 29. Draw a line L and a point A not on the line then construct a line parallel to L and through the point A.

G16.0 30. Draw a line L and a point A not on the line then construct a line perpendicular to L through the point A.

G17.0 31. Find the distance between the points: (-5, 8) and (-3, 4).

G17.0 32. Find the distance between the points: (3, 7) and (-2, -1).

G17.0 33. Graph the circle that is represented by the equation: $(x-4)^2+(y+1)^2=9$

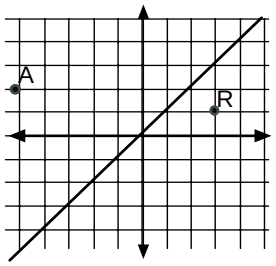
G17.0 34. Graph the circle that is represented by the equation: $(x-2)^2+(y-6)^2=16$

G17.0 35. Give the equation of the circle with center (1,4) and radius 2.

G17.0 36. Give the equation of the circle with center (-3, 7) and radius 5.

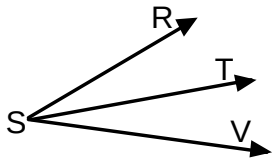
G22.0 37. Given Point A (-5, 2) find the new coordinates after it is reflected over the line y = x.

G22.0 38. Given Point R (3, 1) find the new coordinates after it is reflected over the line y = x.



G 1.0 39. If m∠RST = 3x - 12, m∠TSV = 2x + 6 and m∠RSV = 94 then find m∠RST.

G 1.0 40. If m∠RST = 4x + 3, m∠TSV = x + 7 and m∠RSV = 35 then find m∠RST.

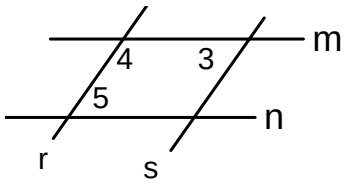


G 1.0 41. In the figure $\overrightarrow{ST}$ bisects ∠RSV. If m∠RST = 3x - 12, m∠TSV = 2x + 6 then find x.

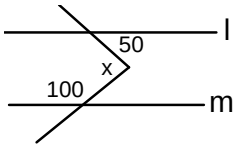
G 1.0 42. In the figure $\overrightarrow{ST}$ bisects ∠RSV. If m∠RST = 4x + 3, m∠TSV = 2x + 12 then find x.

G13.0 43. Given: B is the midpoint of segment AC
Prove: AC = 2AB

G7.0 44. Given: m || n
$\angle 3 \cong \angle 5$
Prove: r || s



G7.0 45 If m || l then find x.



G7.0 46 If m || l then find x.