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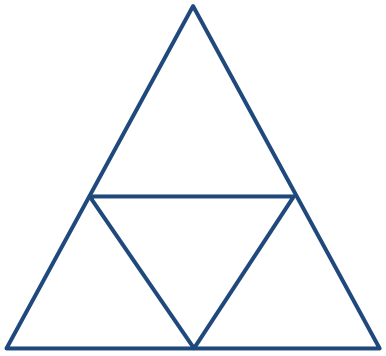
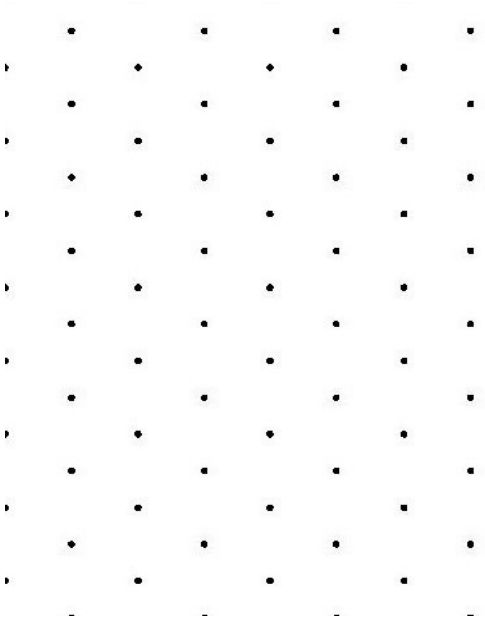
Unit 1 - Geometry Basics Test

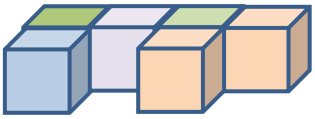
1. Name a three-dimensional figure that can be formed from each net.

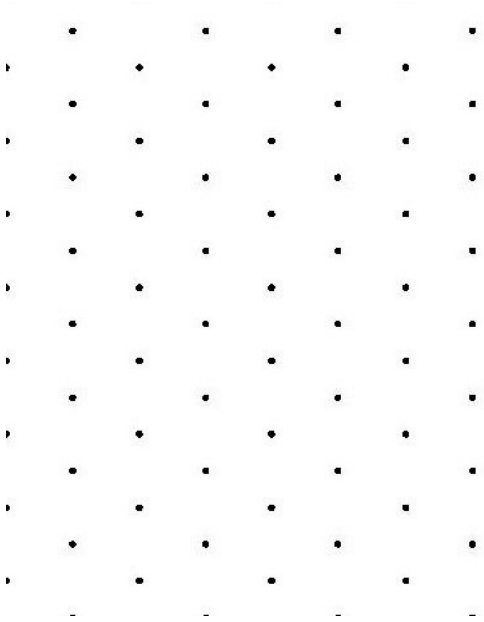


2. Use isometric dot paper to sketch a rectangular prism that is 2 units high. The bases are rectangles with 3 unit's length and 2 unit's width.



3. Make an isometric drawing of each on isometric dot paper.





4. Draw four points, D, F, L and K in plane π. Points D, F and K are collinear. Then sketch $\overrightarrow{LF}$ and $\overleftrightarrow{DK}$.

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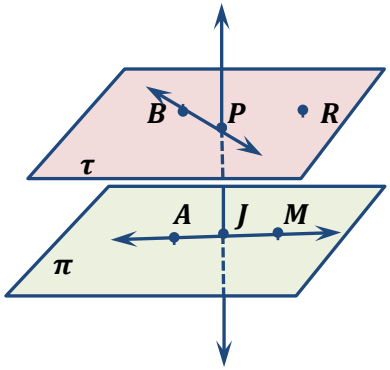
5. Draw and label figure for each relationship.

a. Line segment $\overline{NM}$

b. Line $\overleftrightarrow{GR}$

c. Ray $\overrightarrow{OR}$ and ray $\overrightarrow{OT}$

6. Refer to each figure.



Name the intersection of plane π and line $\overleftrightarrow{PJ}$.

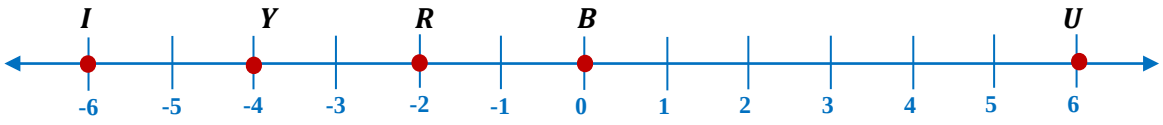
Name the intersection of plane τ and line $\overleftrightarrow{PJ}$.

Name a point that is coplanar with B and P.

Name the opposite ray of ray $\overrightarrow{JM}$.

7. Find the length of each segment using number line. Determine whether each of the segments is congruent.

$IY = ?$ $YR = ?$ $RU = ?$ $IU = ?$



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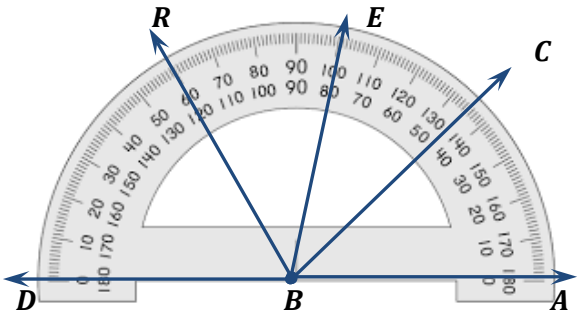
8. Find the value of x and the length of each segment using segment addition postulate.

Point A is between points S and K.
The points are collinear.
$SA = x - 5 \quad AK = x - 3 \quad SK = 10$

$\overline{SA} = ? \quad \overline{AK} = ?$

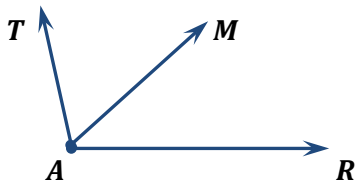
9. Find the measure of each angle.

$m\angle CBE, m\angle EBR, m\angle DBC = ?$



10. Find the indicated angle measures.

If $\overrightarrow{AM}$ bisects $\angle RAT$ and $m\angle RAT = 142$,
find $m\angle RAM$ and $m\angle MAT$.



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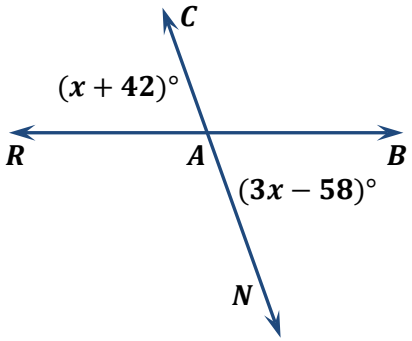
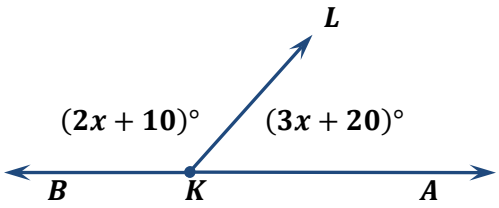
11. Find the value of x and then the indicated angle measures.

$m\angle RAC, m\angle BAN, m\angle BAC, and\ m\angle NAR =?$

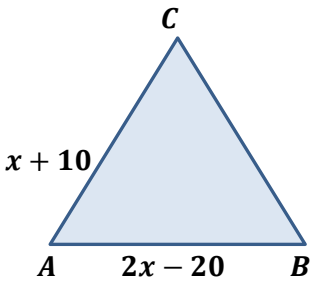


12. Find the value of x and then the indicated angle measures.

If angles $\angle AKL$ and $\angle BKL$ are supplementary and $m\angle AKL = 3x + 20,\ m\angle BKL = 2x + 10$, what are $m\angle AKL$ and $m\angle BKL$?



13. Expressions are given for two side lengths of regular polygon. Find the value of x.



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14. Draw a figure that fits the description.

a. Concave dodekagon **b. Convex decagon** **c. Convex quadrilateral**

15. Determine the point C on the y-axis that is equidistant from $A(4,1)$ and $B(-4,-1)$

16. Determine if $A(1,1)$, $B(6,1)$ and $C(6,4)$ are the vertices of a right triangle.

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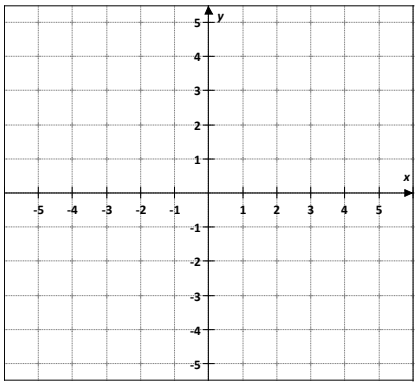
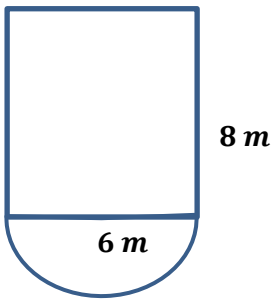
17. Draw the figure in the coordinate plane. Find the perimeter and area.

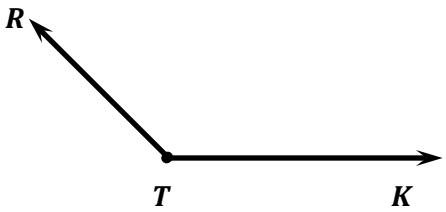
$A(-5,-4)\ , T(3,-4), B(-5,4)\ and\ C(3,4)$
$P_{ABCT} = ?\quad A_{ABCT} = ?$



18. Find the area of the figure.



19. Construct the bisector of the given angle.



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20. Construct a line parallel to a given line through a point not on the given line.