## Math 3 Homework 23

Calculate.
$4 \mathrm{~m} 2 \mathrm{dm} 6 \mathrm{~cm}+1 \mathrm{~m} 5 \mathrm{dm} 2 \mathrm{~cm}=\ldots \mathrm{m} \ldots \mathrm{dm} \ldots \mathrm{cm}$
$9 \mathrm{~m} 8 \mathrm{dm} 3 \mathrm{~cm}-6 \mathrm{~m} 2 \mathrm{dm} 1 \mathrm{~cm}=$ $\qquad$ m $\qquad$ dm $\qquad$ cm


Find the perimeter and the area of the following shapes. Try to use the most optimal way to calculate. Show your work.

| $\|c\|$ <br> 6 cm |
| :---: |
| cm <br> 7 cm |


|  | 4 cm |
| :---: | :---: |
| 10 cm | 4 cm |
| 9 cm |  |

Perimeter $=$ $\qquad$
Area $=$ $\qquad$

Perimeter $=$ $\qquad$
Area $=$ $\qquad$

3 Connect the names with the appropriate drawings.
Straight line $\overleftrightarrow{\boldsymbol{A B}}$
Segment $\overline{\boldsymbol{A B}}$
Ray $\overrightarrow{\boldsymbol{A B}}$


Use a ruler.
a) Plot straight line $\overleftrightarrow{N Q}$
b) Plot ray $\overrightarrow{R T}$
c) Label the intersection $\mathbf{M}$.
d) Plot segment $\overline{M F}$.

Use a ruler and a compass. Draw a line segment $\overline{A B}$, place a point C on the segment between points A and $B$. Write down the name of each line segment you get. Place another point D and $\mathrm{D}^{\prime}$ on the same distance from point C (use a compass to put points D and $\mathrm{D}^{\prime}$ on the same distance from point C - any distance of your choice). Point D should be between points A and C, point D' should be between points C and B. between Name all line segments you get.

a) Draw a line segment $\overline{A B}$.

Draw another line segment $\overline{C D}$ in a way that the intersection between $\overline{A B}$ and $\overline{C D}$ is a point K .
b) Draw a line segment $\overline{A B}$ again below. Draw another line segment $\overline{E F}$ in a way that the intersection between $\overline{A B}$ and $\overline{E F}$ is a line segment $\overline{E B}$.

7
Interior and Exterior of an Angle. Does point P belong to an $\angle A C B$ ? $\qquad$ Does a segment $\overline{A B}$ belong to an $\angle A C B$ ? $\qquad$


Do all points of a ray $\overrightarrow{B A}$ belong to the $\angle A C B$ ? $\qquad$
8.
a) Take a blue pencil and follow the part of the ray $\overrightarrow{B A}$ which is inside the angle $\angle A C B$
b) Take a green pencil and follow the part of the ray $\overrightarrow{B A}$ which is outside the angle $\angle A C B$

9. Use a compass and the ruler to find a midpoint between points A and D.


10 Practice to draw concentric circles. Place a center $\mathbf{A}$ in the middle of the page. Using a compass, draw 3 circles - with a radius $7 \mathrm{~cm}, 5 \mathrm{~cm}$ and 3 cm . Name each circle. What is the diameter of each circle?

11
a) Use a compass to draw a circle centered at a given point $\mathbf{A}$ and passing through another point $\mathbf{B}$ (choose your own compass opening).
b) Use a straightedge and connect the point $\mathbf{B}$ on the circle to the center $\mathbf{A}$ to make a radius $\boldsymbol{r}$.
c) Mark another point $\mathbf{C}$ at any place between points $\mathbf{A}$ and $\mathbf{B}$. Using a compass draw a circle with a radius $\overline{\boldsymbol{A C}}$.
d) Mark one more point $\mathbf{D}$ at any place between points $\mathbf{A}$ and $\mathbf{C}$. Using a compass draw a circle with a radius $\overline{\boldsymbol{A D}}$.

## - $\mathbf{A}$

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The $\angle A C B$ is $43^{\circ}$. How big (in degrees) will be a complementary angle? How big (in degrees) will be a supplementary angle?

Complementary angle $=$ $\qquad$ supplementary angle $=$ $\qquad$

The square with a side equal to 1 m cut down on the smaller squares with a side of 1 cm . Then all small squares are put along the straight line one by one. The line will have a width equals to 1 cm . How long is the line going to be?

