1. An Isosceles Trapezoid $ABCD$ is shown at the right. What are the coordinates of point $C$?

   $$(a-b,c)$$

2. Rectangle $ABCD$ is shown on the right. What are the missing Coordinates?

   $D(0,b)$
   $B(a,0)$

3. Kanye and Kendrick are working on rhombus $JAYZ$. The diagonals are 10 in and 24 in long. They realize the Pythagorean Theorem will be used. What property of a rhombus does Kendrick need to prove to Kanye that $AZ$ is 13 in?

   The diagonals of a rhombus are perpendicular.
4. If \( m\triangle SQR = 78 \) and \( m\angle RPQ \) is 47, what is \( m\angle QRP \)?

\[ m\angle QRP = 31 \]

5. Find \( m\angle 1 \) in rhombus \( ABCD \).

\[ m\angle 1 = 57 \]

6. What is the value of ‘\( y \)’ in parallelogram \( ABCD \)?

\[ y = 2 \]

7. In the isosceles trapezoid at the right, what is the measure of \( \angle A \)?

\[ m\angle A = 108 \]
8. What is $m\angle 1$ in this parallelogram?

$m\angle 1 = 10$

9. The vertices of a parallelogram have coordinates as shown in this figure. What are the coordinates of $Q$?

$Q(a+b, c)$

10. Rectangle QPRS is shown at the right. What are the coordinates of point $R$?

$R(a, 2c)$
11. Collin wants to build a rectangular frame for the base of a weird flashlight. He knows that \( \angle EFG \) is a right angle. What would be a statement to guarantee that the frame is a rectangle.

\[ \text{EF is parallel to HG AND EH is parallel to FG.} \]

12. A segment has a midpoint at (4,5) and an endpoint at (-3,4). What is the location of the other endpoint?

\[ (11,6) \]

13. Given: \( \triangle ACD = \triangle BCD \); \( m<ACD=30 \);

\( m<CAD=2(m<ACD) \). What term best classifies \( \triangle ACB \)?

\[ \text{Equilateral Triangle} \]

14. Two lines intersect to form this figure. What is the value of \( x \)?

\[ x=7 \]
15. The coordinates of point A are (-6,a). Point B is created by reflecting point A across the y-axis and then translating the point 3 units to the left. What are the coordinates of point B?

(3,a)

16. What is a value for ‘b’ that would result in \( b|5x+7| \geq 40 \) having no solution?

Any negative #

17. What is the solution to this system of equations?

\[
\begin{align*}
7x + 7y &= 14 \\
y &= x - 2
\end{align*}
\]

x=2, y=0

18. In the diagram lines AB and CD are parallel. Find the missing angle.

missing angle=101.4

19. The graph of a system of linear equations is shown. What is the solution of the system?

Solution (1,3)
20. Graph and identify the center: \((x - 4)^2 + (y + 2)^2 = 16\)

A circle centered at (4,-2) and with a radius of 4.

21. Given:
- Segment AB is tangent to Circle E at point B
- Segment CD is the diameter of Circle E
- DE=2.5
- AB=6

What is AC?

AC=4

22. O is the center of the circle. What is the measure of \(<ABC\)?

\(m<ABC=60\)

23. In Circle O, segment CB is a diameter. What is \(m<ABC\)?

\(mABC=55\)
24. Given:
- ΔCAB is inscribed in circle O.
- Measure of Arc AB=110 degrees
- Measure of Arc BAC=270 degrees
- \( m<OBA = 40 \text{ degrees} \)

What is \( m<CAO \)?

\( M<CAO=5 \)