

#1-3 Fill in the blank (1 pt each)

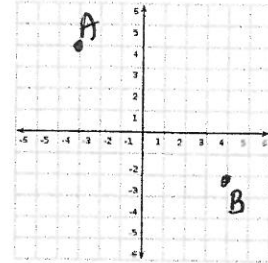
- Two angles that sum to 180° are Supplementary.
- When two angles are adjacent and supplementary they form a linear pair.
- The midpoint of (3,5) and (-1,9) is (1, 7). (2 pt)

$$\left(\frac{3+(-1)}{2}, \frac{5+9}{2}\right)$$

- Find the distance between points A and B on graph. (2 pt)

$$\begin{aligned} 6^2 + 7^2 &= c^2 \\ 36 + 49 &= c^2 \\ 85 &= c^2 \end{aligned}$$

9.22



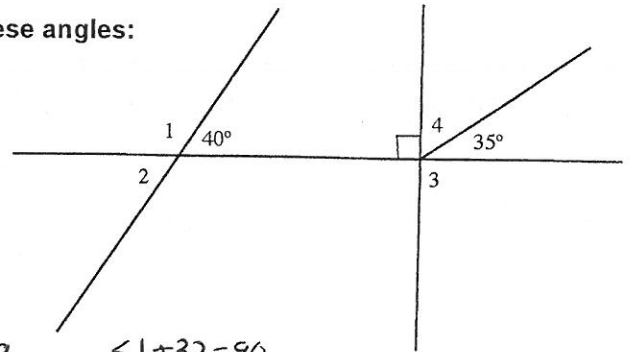
- Find the distance between the points (4,7) and (6,3). (2 pt)

$$4^2 + 2^2 = c^2$$

4.47

5. Use the diagram (not a protractor) to find the measure of these angles: (1 pt each)

- $\angle 1 = 140^\circ$
- $\angle 3 = 90^\circ$
- $\angle 2 = 40^\circ$
- $\angle 4 = 55^\circ$



- $\angle 1$ and $\angle 2$ are complementary angles.
 $\angle 1$ and $\angle 3$ are vertical angles. (equal)
 If $m\angle 2 = 32^\circ$, what is the measure of $\angle 3$? (1 pt)

$$\angle 1 + \angle 2 = 90$$

$$\begin{aligned} \angle 1 + 32 &= 90 \\ \angle 1 &= 58^\circ \end{aligned}$$

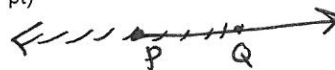
58°

- If $\angle 1$ and $\angle 2$ are a linear pair and $m\angle 2 = 67$, then $m\angle 1 = ?$ (1 pt)

113°

- Where do \overrightarrow{PQ} and \overrightarrow{QP} intersect? (A sketch will help) (1 pt)

\overrightarrow{PQ}

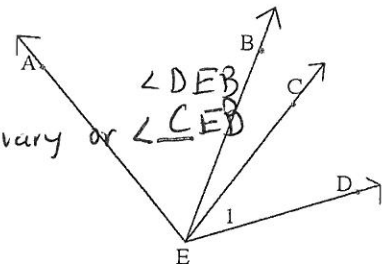


- Draw one sketch with points A, B, C and D so that \overrightarrow{CB} and \overrightarrow{CA} are opposite rays and \overrightarrow{CD} and \overrightarrow{CA} are the same ray. (1 pt)



#10-15, Refer to the diagram at right. (1 pt each)

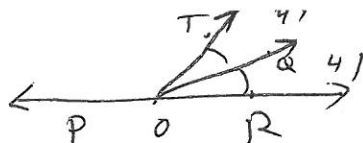
- Name the sides of $\angle 1$ \overrightarrow{EC} & \overrightarrow{EB}
- Name a point interior of $\angle DEB$ C
- Name an angle adjacent to $\angle AEB$ $\angle BEC$ something here, could vary
- If $m\angle AEB = 75^\circ$ and $m\angle AEC = 130^\circ$, find $m\angle BEC$ 55°
- If \overrightarrow{EB} bisects $\angle AED$, \overrightarrow{EC} bisects $\angle BED$ and $m\angle BEC = 30$, find $m\angle AEC$ 90°
- Use a protractor to measure $\angle BED$ 50°



(accept $50 - 54^\circ$)

16. \overrightarrow{OR} and \overrightarrow{OP} are opposite rays. \overrightarrow{OQ} bisects $\angle TOR$.
 $m\angle TOQ = 41^\circ$. Find $m\angle TOP$. (2 pt)

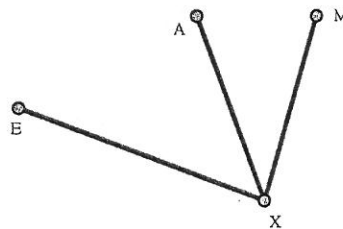
98°



17. In the sketch at right $m\angle EXA = (7x-1)^\circ$, $m\angle AXM = (3x+12)^\circ$
and $m\angle EXM = 66^\circ$. Find the exact measure of $\angle EXA$. (2 pt)

$7x-1 + 3x+12 = 66$

37.5°



18. T is the midpoint of PQ. Which of the following is NOT an appropriate statement? (1 pt)

a. $PT = TQ$

b. $\overline{PT} \cong \overline{TQ}$

c. $PT + PQ = TQ$

d. $PT + TQ = PQ$

#19-21, answer each with always true, sometimes true or never true. (1 pt each)

19. \overrightarrow{CD} and \overrightarrow{CE} form \overrightarrow{DE} *sometimes*

20. If a ray divides an angle into two acute angles, then it bisects the angle. *sometimes*

21. If C is interior $\angle BOD$ and B is interior $\angle AOC$, then B must be interior of $\angle DOC$ *never*

22. One angle is 15 more than twice its supplement. Find the measure of each angle. (2 pt)

$y + x = 180$ (supplements)
 $y = 2x + 15$
 $(2x + 15) + x = 180$

$x = 55$

125° & 55°