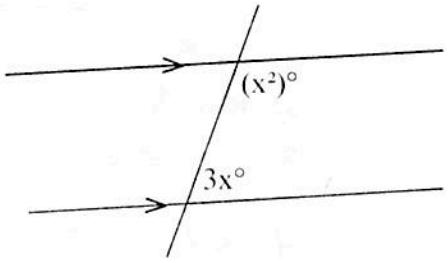
CBA 1B Review Name: _____ Pd:_____

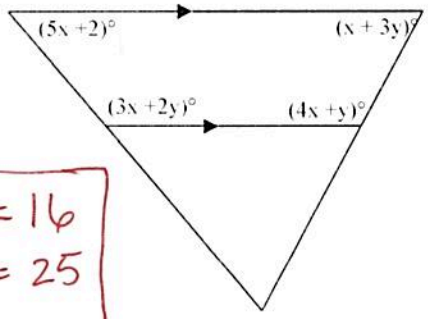
1. Find the values of x. Justify your answers with geometric reasons.



$X = -15 \quad x = 12$

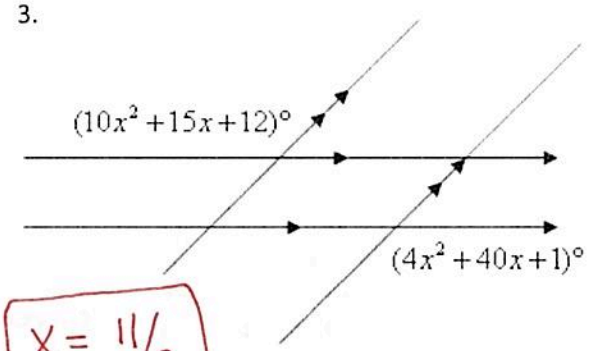
Find the values of x, y, and/or z. All expressions are representing angles. Be sure to box only the answers that work in the problem situation. Picture not drawn to scale. Justify the set-up geometrically.

2.



$X = 16$
$y = 25$

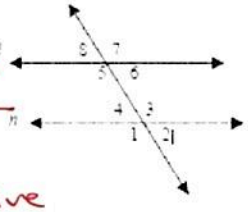
3.



$X = 11/3$
$X = 1/2$

Write a two column proof for the following:

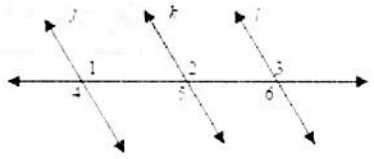
4 Given: $l \parallel n$
Prove: $m\angle 3 + m\angle 6 = 180°$



Statements	Reasons
1. $l \parallel n$	1. Given
2. $m\angle 3 = m\angle 3$	2. Reflexive
3. $m\angle 6 = m\angle 6$	3. $\parallel$
4. $m\angle 3$ and $\angle 6$ supplementary	4. Same side interior $\angle$'s
5. $m\angle 3 + m\angle 6 = 180$	6. Definition of supplementary $\angle$'s

CBA 1B Review Name: _____ Pd:_____

5. Given: $j \parallel k, k \parallel l$
Prove: $\angle 1 \cong \angle 3$

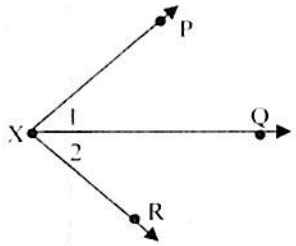


S	R
1. $j \parallel k$	1. Given
2. $k \parallel l$	2. "
3. $\angle 1 \cong \angle 2$	3. corresponding $\angle$s post.
4. $\angle 2 \cong \angle 3$	4. corr. $\angle$s post.
5. $\angle 1 \cong \angle 3$	5. Transitive

6. Given: EF = GH
Prove: EG = FH

S	R
1. EF = GH	1. Given
2. FG = FG	2. Reflexive
3. EF + FG = GH + FG	3. Addition property of equality
4. EF + FG = EG	4. segment add. post.
5. GH + FG = FH	5. "
6. EG = FH	6. Substitution

7. In the diagram, suppose $\overline{XQ}$ bisects $\angle PXR$ and the $m\angle 1 = (x^2)^\circ$ and the $m\angle 2 = (x + 30)^\circ$.
Find the $m\angle PXR$.



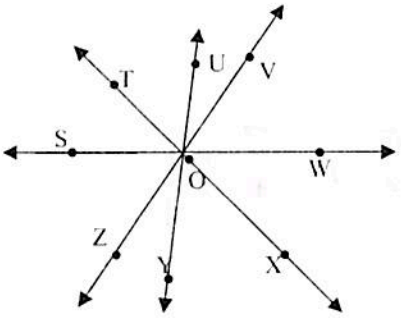
$x = 6 \quad x = -5$

↗ Use positive # for $\angle$'s

$m\angle PXR = 72^\circ$

CBA 1B Review Name: _____ Pd:_____

8. In the diagram, $\overline{OT}$ bisects ∠SOU, and $\overline{OV}$ bisects ∠TOW, m∠SOT=5x+y, m∠TOU=38, m∠VOT=7x+y and m∠VOW=71, find value of x & y.



$x = 16.5$
$y = -44.5$

Two angles are complementary. The measure of the larger angle is 5 times the measure of the smaller angle. Find the measure of the larger angle

75°

B is the midpoint of $\overline{AC}$. For each pair of points given, find the coordinates of the third point.

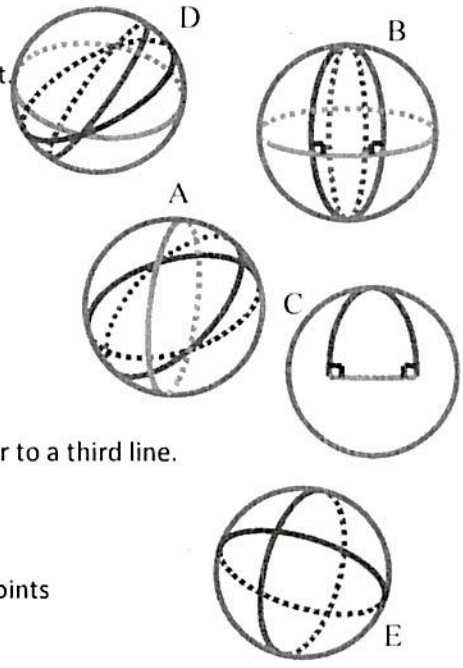
9. A(2,8), C(-4,-4)

B (-1, 2)

10. C(2, 8), B(-2, 2)

A (-6, -4)

For #11-14, Match each statement with the corresponding picture at the right. Use each picture only once.



____ In spherical geometry, a triangle that has an interior angle sum > 180°
Can this happen in planar geometry? (yes or no)

skip

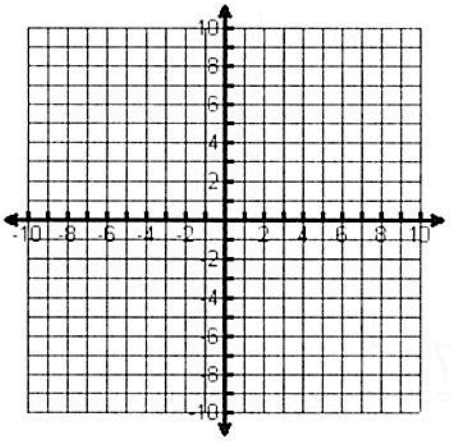
____ In spherical geometry, two lines that intersect at more than one point
Can this happen in planar geometry? (yes or no)

____ In spherical geometry, two intersecting lines that are both perpendicular to a third line.
Can this happen in planar geometry? (yes or no)

____ In spherical geometry, three great circles that intersect in exactly two points

CBA 1B Review Name: _____ Pd:_____

15. Austin (10, -7) and Dallas (0, 8) are plotted on a coordinate grid. Podunk is $\frac{3}{4}$ the distance from Austin to Dallas. What is the coordinate location of Podunk P(,)?



$P\left(\frac{5}{2}, \frac{17}{4}\right)$

16. $\overline{JK}$, shown below, is 9 inches long. If point L is on $\overline{JK}$ such that JL is equal to 2x and LK is equal to $x^2 + 1$, what is the value of x?

$X = -4$ $X = 2$

positive answer for measurement

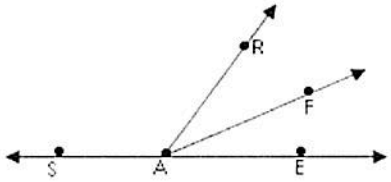
17. B is the midpoint of $\overline{AC}$. Find the value of x and the length of AB. Box the answers that work in the problem situation.

AB = $3x - 2$ BC = $2x - 1$

$X = 1$

$AB = 1$

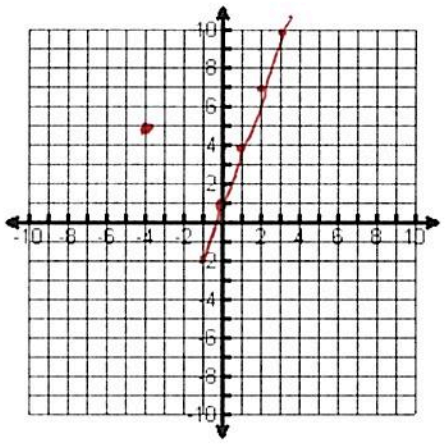
18. $\overrightarrow{AF}$ bisects ∠RAE, m∠SAR=6x, m∠RAE=90-x, find the value of x.



$X = 18$

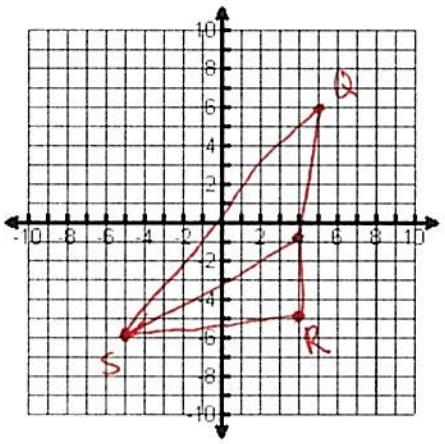
CBA 1B Review Name: _____ Pd:_____

19. What is the distance between the line y = 3x + 1 and the point (-4, 5)



$d = \sqrt{26}$

20. Graph triangle QRS on the grid below, using the points Q (5, 6), R (4, -5), and S (-5, -6). Find the length of the median from S to QR. Round to the nearest thousandth.



midpoint of QR

$\left(\frac{9}{2}, \frac{1}{2}\right)$

$d = \frac{\sqrt{530}}{2}$

Read over the chapter summaries and review your vocabulary