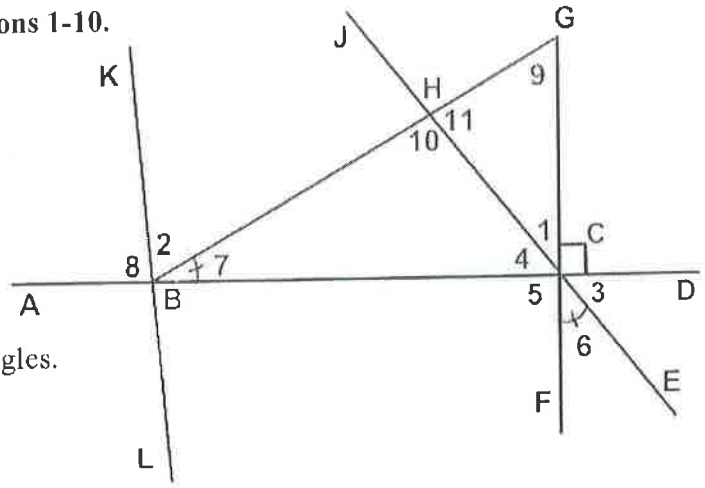
Math 1

Name KEY

6-3 Vocabulary Applications 1

Use the picture to the right to answer questions 1-10.



1. Name two pairs of vertical angles.

∠1 and ∠6 ∠4 and ∠3
∠10 and ∠JHG

2. Name two linear pairs.

∠10 and ∠11 ∠JHG and ∠11

3. Name two pairs of supplementary angles.

∠GCD and ∠5 ∠10 and ∠11

4. Name two pairs of congruent angles.

∠7 and ∠6 ∠1 and ∠6

5. Name a pair of complementary angles.

∠3 and ∠6 ∠1 and ∠4

6. Give two other names for ∠2.

∠KBH ∠HBK

7. Name a pair of perpendicular line segments.

$\overline{GF} \perp \overline{BD}$ $\overline{CD} \perp \overline{CF}$

8. Name an obtuse angle, an acute angle and a right angle.

Obtuse ∠HCD acute ∠3 Right ∠GCD

9. Assuming m∠1 = 38° and m∠2 = 58°, find the measure of angles 2-11.

∠3 52° ∠4 ~~60°~~ 52° ∠5 90°

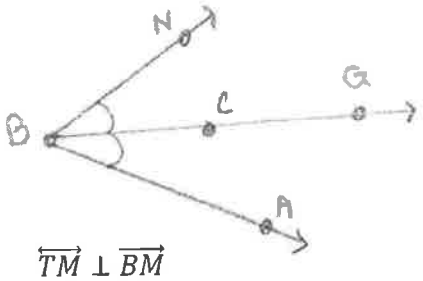
∠6 38° ∠7 38° ∠8 84°

∠9 ~~41°~~ 52° ∠10 ~~82°~~ 90° ∠11 ~~98°~~ 90°

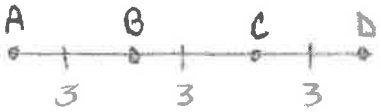
Sketch drawings of the following:

10. $q \parallel p$

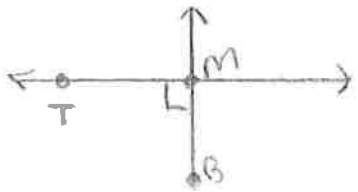
11. $\angle NBC \cong \angle ABC$ and $\overrightarrow{BG}$ bisects $\angle NBA$



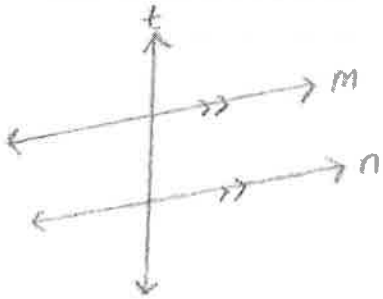
12. $\overline{AB} \cong \overline{BC} \cong \overline{CD}$



13. $\overleftrightarrow{TM} \perp \overleftrightarrow{BM}$



14. Lines m and n are parallel with transversal t.



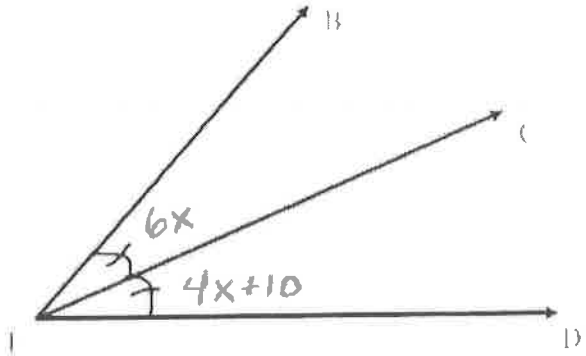
Use the picture at the right to answer the following questions:

15. $m\angle CED = 4x+10$ and $m\angle BEC = 6x$
Solve for x.

$4x+10=6x$

$10=2x$

$5=x$



16. m∠BEC = 30°

$6(5)$

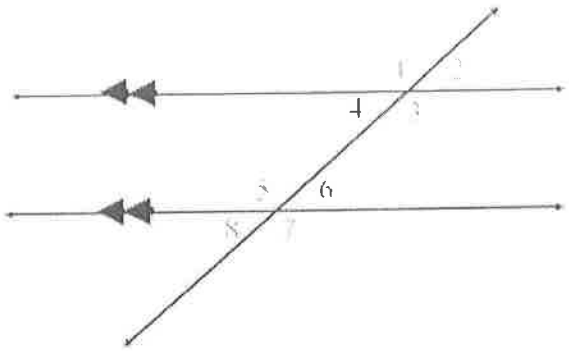
17. m∠CED = 30°

$4(5)+10$

18. m∠BED = 60°

$30+30$

Use the picture to the right to answer the following questions:



19. If $m\angle 1 = 14x+4$ and $m\angle 3 = 16x-12$

Solve for x. Vertical angles $\cong$

$14x + 4 = 16x - 12$

$4 = 2x - 12$

$16 = 2x$

$8 = x$

20. What is the m∠1?

$14(8)+4 = 116°$

21. What is m∠3

$116°$

22. What vocabulary word describes ∠1 and ∠3?

Vertical angles.

23. What vocabulary word describes ∠1 and ∠2?

Linear Pair

24. What is m∠2

$180 - 116 = 64°$

25. If $m\angle 8 = 2x+27$ and $m\angle 1 = 12x+13$

Solve for x.

$2x + 27 + 12x + 13 = 180$

$14x + 40 = 180$

$14x = 140$

$x = 10$

26. What is the m∠1?

$12(10) + 13 = 133°$

27. What is m∠8

$2(10) + 27 = 47°$

28. What vocabulary word describes ∠1 and ∠8?

Same side exterior

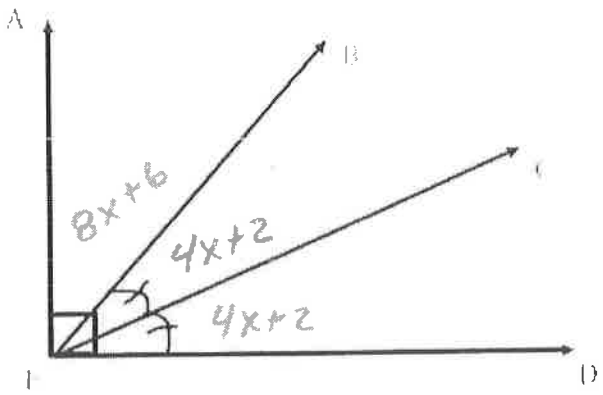
29. What vocabulary word describes ∠8 and ∠7?

Linear Pair

30. What is m∠7

$133°$

Use the picture at the right to answer the following questions:



31. What vocabulary word describes $\overrightarrow{EC}$?

Angle Bisector

32. $m\angle AEB = 8x+6$ and $m\angle BEC = 4x+2$
Solve for x.

$8x+6+4x+2+4x+2=90$

$16x+10=90$

$16x=80$

$x=5$

33. m∠AEB = 46°

$8(5)+6$

34. m∠BEC = 22°

$4(5)+2$

35. m∠CED = 22°

36. m∠AEC = 68°

$46+22$

37. m∠BED = 44°

$22+22$

38. Draw $\overrightarrow{XY}$.

39. Draw $\overrightarrow{YX}$

40. Draw $\overline{PU}$

41. Give another name for $\overline{PU}$.

$\overline{UP}$

42. Draw $\overleftrightarrow{TM}$

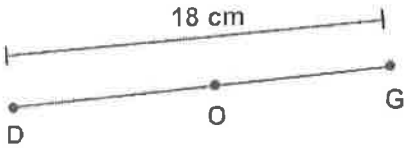
43. Give another name for $\overleftrightarrow{TM}$.

$\overleftrightarrow{MT}$

44. What's another name for $\overrightarrow{AZ}$?

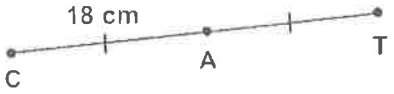
$\overrightarrow{AQ}$

45. Assuming O is the midpoint of DG, what is the length of DO?



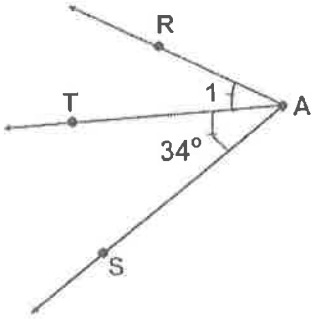
DO = 9 cm

46. What is the length of CT?



CT = 36 cm

47. Give another name for angle 1 using three points.



$\angle RAT$

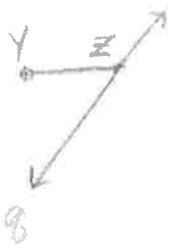
48. What is $\overline{AT}$ called?

Angle bisector

49. What is the measure of $\angle RAS$?

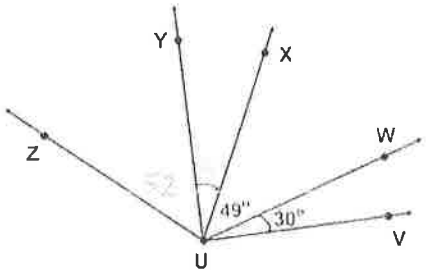
$m\angle RAS = 68°$

50. Draw: $\overline{YZ}$ intersects line q at point Z.



51. What is the measure of ∠XUY?

30°



52. What is the measure of ∠VUX?

79°

53. If ∠WUX ≅ ∠YUZ, find the measure of ∠VUZ.

2(49) + 2(30) = 158°

54. Find the measure of ∠YUV.

109°

55. If m∠YUZ is 52°, what is the measure of ∠ZUW?

131°

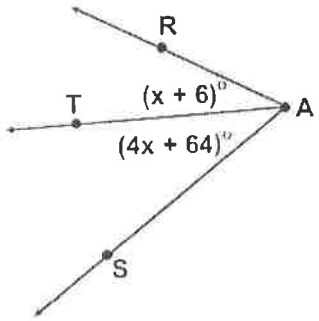
56. Find x using the diagram to the right if m∠RAS = 80°.

$x + 6 + 4x + 64 = 80$

$5x + 70 = 80$

$5x = 10$

$x = 2$



57. Find the measure of ∠SAT.

4(2) + 64 = 72°