

BM#1 – REVIEW

Using a property from algebra, justify the following statements.

1. $LM = LM$
2. If $m < A = m < B$ and $m < B = m < C$, then $m < A = m < C$.
3. $2(x + 5) = 2x + 10$
4. If $x = 10$ and $3x = y$, then $30 = y$.
5. If $x = 9$, then $9 = x$.
6. If $8x = 80$, then $x = 10$.
7. If $x = y$, then $x - 3 = y - 3$.
8. $\angle CAT \cong \angle TAC$
9. If $x = 10$, then $x + 5 = 10 + 5$
10. If $6x = 8$, then $12x = 16$

11. Given: $\triangle GEO \cong \triangle MTR$. You can conclude that:
a. $\angle O \cong \angle T$ b. $\overline{EG} \cong \overline{TM}$ c. $\angle OGE \cong \angle MRT$ d. $\overline{RM} \cong \overline{OG}$ e. $\overline{GE} \cong \overline{MT}$

12. Given: $\triangle RGA$ and $\triangle PMC$ with $\overline{RG} \cong \overline{PC}$, $\angle A \cong \angle M$, and $\angle G \cong \angle P$. Which method could be used to prove that $\triangle RGA \cong \triangle PMC$?
a. SSS b. SAS c. AAS d. ASA e. Not enough information for a proof.

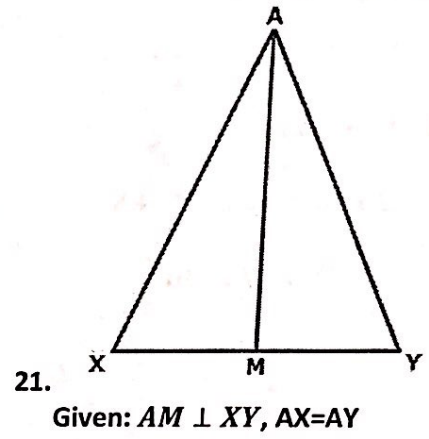
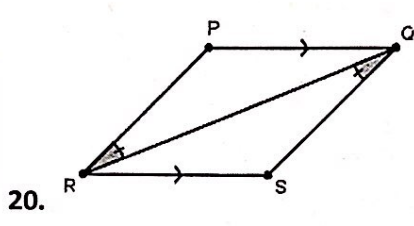
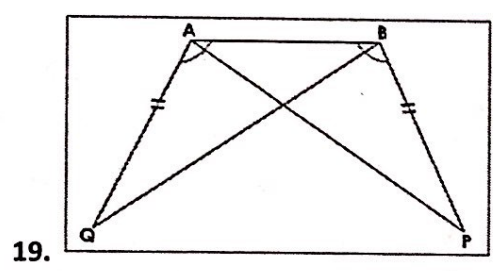
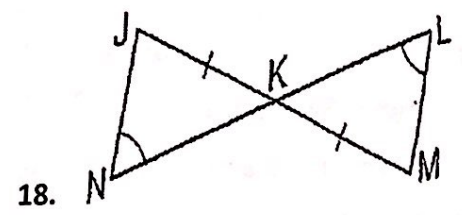
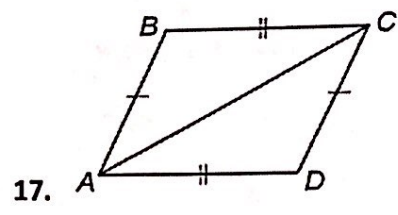
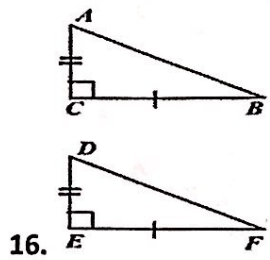
13. The measures of the angles of a triangle are $2x + 10$, $3x$ and $8x - 25$. Solve for x .

14. If $\triangle TAR \cong \triangle DEW$, the $\angle A \cong$ _____, $\overline{RT} \cong$ _____, and $\triangle ART \cong$ _____.

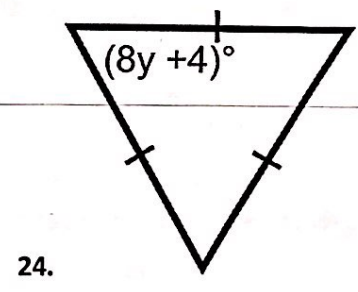
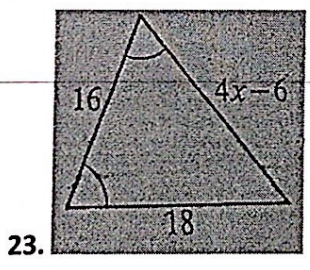
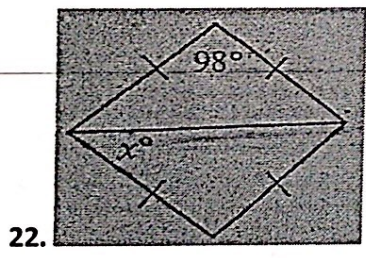
15. Give the image points of the line segment $\triangle ABC$, which of the following would result in similar figures?
A(-3, 7) B(4, 2) C(0, 5)

a. A' (-3, -7) B'(4, -2) C'(0, -5)
b. A' (7, -3) B'(2, 4) C'(5, 0)
c. A' (-1, 6) B'(6, 1) C'(2, 4)
d. A' (-6, 14) B'(8, 4) C'(0, 10)

For problems 16 – 21: Determine if the triangles are congruent. MARK your diagrams! If so, write a congruency statement AND state the method of proving them congruent. If not, write "no congruence".

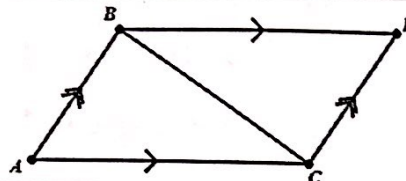


For problems 22-24, find the value of x or y.



<p>25. Given: N is the midpoint of \overline{MP}, $\overline{LM} \parallel \overline{OP}$ Prove: $\triangle LNM \cong \triangle ONP$</p>	
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26. Given: $AB \parallel CD, AC \parallel BD$
 Prove: $\overline{AB} \cong \overline{CD}$

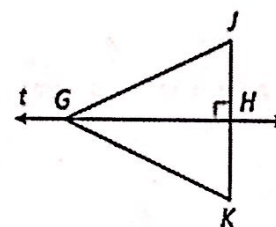


27. Given that line t is the perpendicular bisector of \overline{JK} and $GK = 9.73$, find GJ

28. Given that line t is the perpendicular bisector of \overline{JK} , $JG = 2x + 7$ and $KG = 5x - 17$, find KG

29. Given that $GJ = 70.2$, $HK = 17.5$, and $GK = 70.2$, find JK .

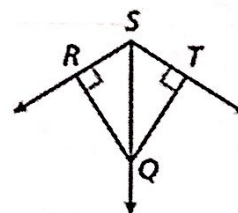
30. Given that line t is the perpendicular bisector of \overline{JK} , if $JH = 2x - 1$, $GJ = 4x - 2$ and $GK = 2x + 10$, find JH



31. Given that $m\angle RSQ = m\angle TSQ$ and $TQ = 1.3$, find QR

32. Given that $m\angle RSQ = 58^\circ$, $RQ = 49$ and $TQ = 49$, find $m\angle RST$

33. Given that $RQ = TQ$, $m\angle QSR = (2a + 48)^\circ$ and $m\angle QST = (6a + 40)^\circ$, find $m\angle RST$



34. $HI = ?$

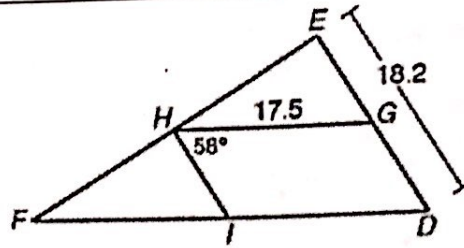
37) $DF = ?$

35. $GE = ?$

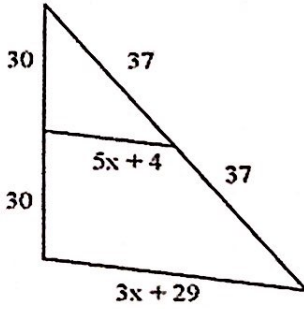
38) $m\angle HIF = ?$

36. $m\angle HGD = ?$

39) $m\angle D = ?$

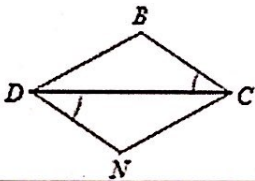


40) Solve for x

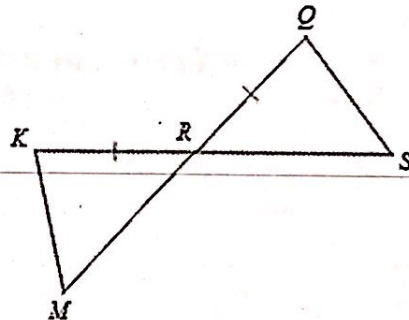


State what additional information is required in order to know that the triangles are congruent for the reason given.

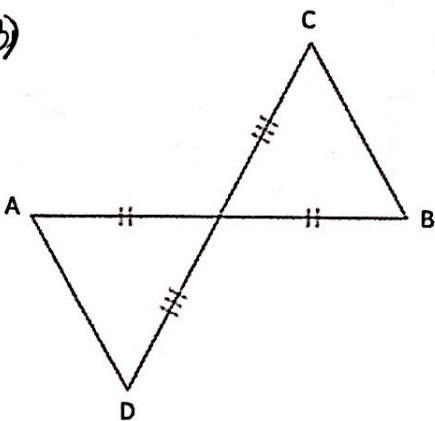
41) SAS



42) AAS



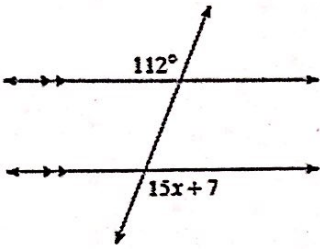
43)



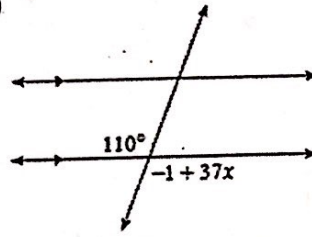
If $m\angle A = 2x + 4$, $m\angle B = 7x - 1$ and $m\angle C = 2x + 9$, find measure of angles A, B, C, and D

Solve for x.

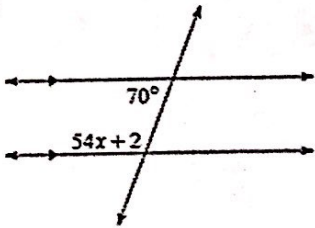
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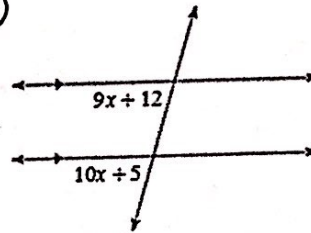
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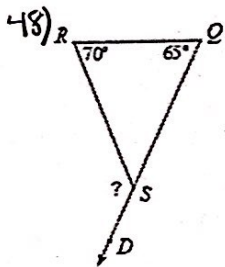
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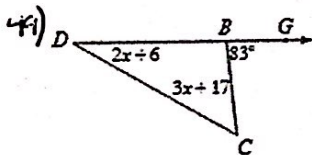
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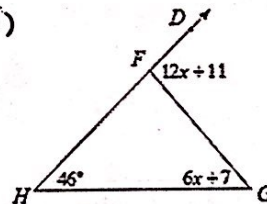
Find the measure of each angle indicated.



Solve for x.

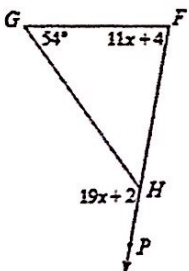


50)



Find the measure of the angle indicated.

51) Find $m\angle PHG$.



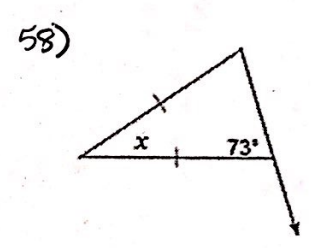
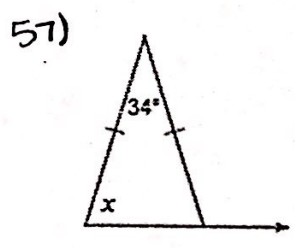
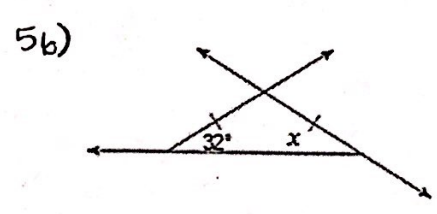
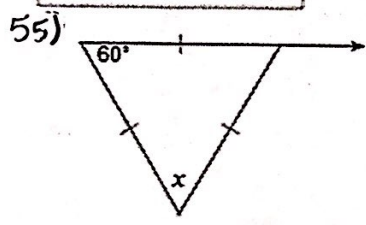
Solve each proportion.

52) $\frac{m+5}{3m-10} = -\frac{2}{8}$

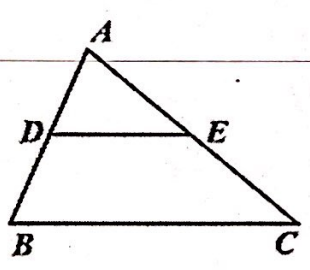
53) $\frac{9}{x+5} = \frac{2}{3x-4}$

54) Draw and label an isosceles triangle

Find the value of x .

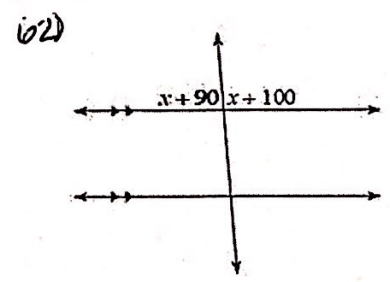
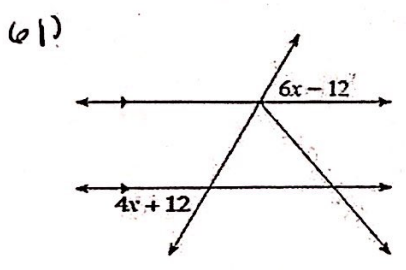


59) If a triangle is equilateral, it is also _____. This means that each angle is _____ degrees.



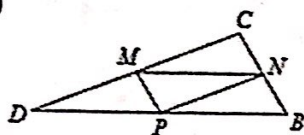
60) IF DE is the midsegment of Triangle ABC, list everything you know about the above diagram.

Find the measure of the angle indicated in bold.



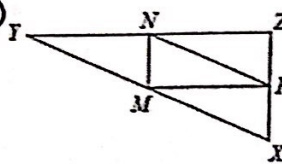
In each triangle, M, N, and P are the midpoints of the sides. Name a segment parallel to the one given.

(63)



___ \parallel \overline{CB}

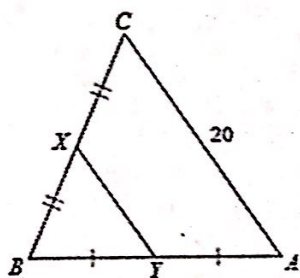
(64)



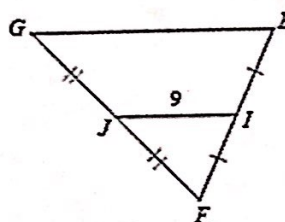
$\overline{XZ} \parallel$ ___

Find the missing length indicated.

(65) Find YX

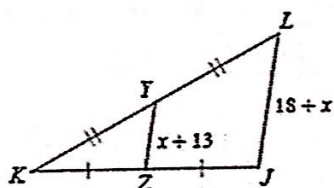


(66) Find EG

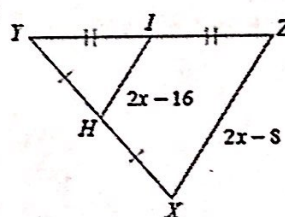


Solve for x.

(67)

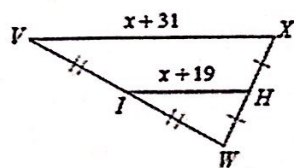


(68)

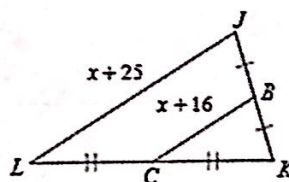


Find the missing length indicated.

(69) Find XV

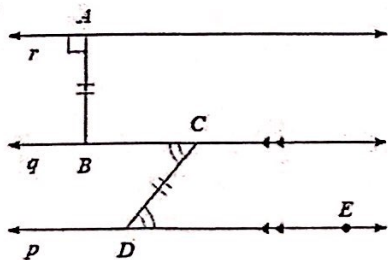


(70) Find JL

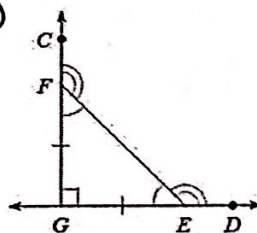


List all information given by the marks on the diagram.

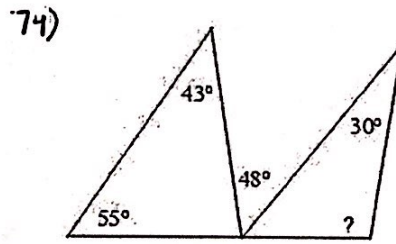
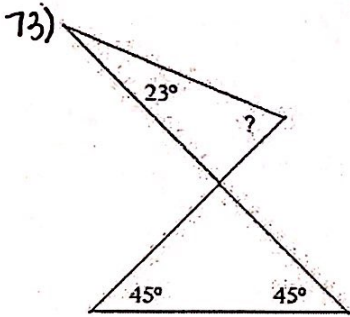
(71)



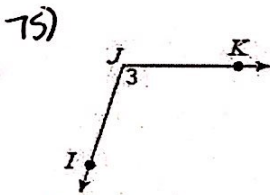
(72)



Find the measure of each angle indicated.

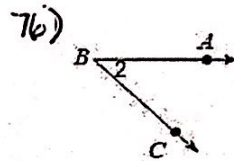


Name each angle in four ways.



Choose the wrong name for this angle:

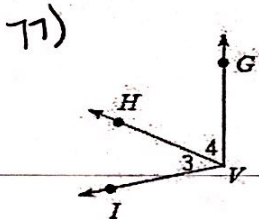
- A) $\angle 3$
- B) $\angle J$
- C) $\angle K$
- D) $\angle KJI$



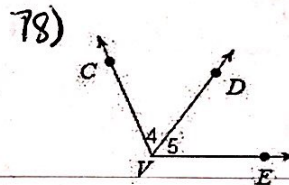
Choose the wrong name for this angle:

- A) $\angle BCA$
- B) $\angle ABC$
- C) $\angle B$
- D) $\angle 2$

Name all the angles that have V as a vertex.

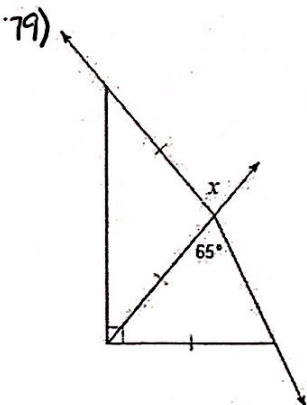


- A) $\angle 3, \angle 4, \angle IVG$
- B) $\angle 3, \angle 4, \angle HIV$
- C) $\angle 3, \angle 4, \angle VGH$
- D) $\angle 3, \angle 4, \angle GHI$



- A) $\angle 4, \angle 5, \angle CVE$
- B) $\angle 4, \angle 5, \angle DCV$
- C) $\angle 4, \angle 5, \angle EDC$
- D) $\angle 4, \angle 5, \angle VED$

Find the value of x.



80) $m\angle 2 = 18x + 2$

