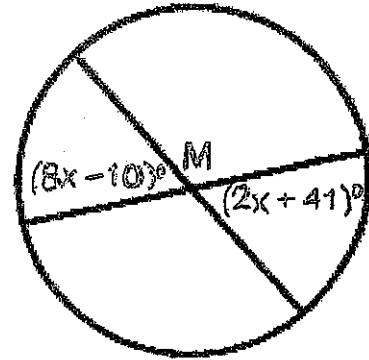


COMPLEMENTARY, SUPPLEMENTARY, AND VERTICAL ANGLES

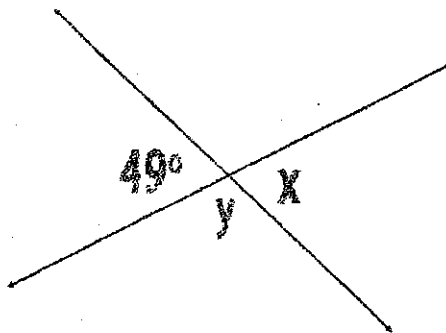
NAME _____

What is the value of x ?

How many degrees are in angle M ?

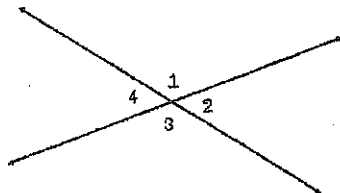


Find x and y .



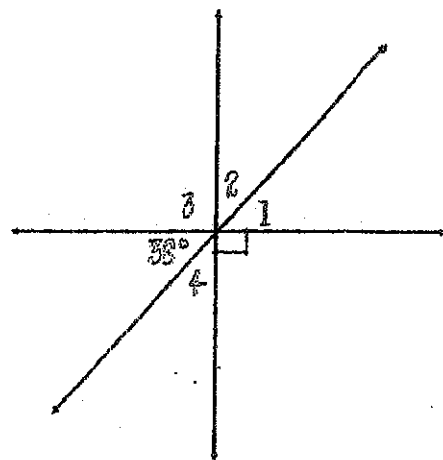
Angle E is complementary to angle F . Angle G is complementary to angle F . If angle E measures 39° , what is the measure of angle F and angle G ?

In the accompanying figure, two lines intersect. Angle 3 measures $(2x + 45)^\circ$ and angle 4 measures $(5x + 30)^\circ$. Find the measure of angle 2.



Solve for each missing angle.

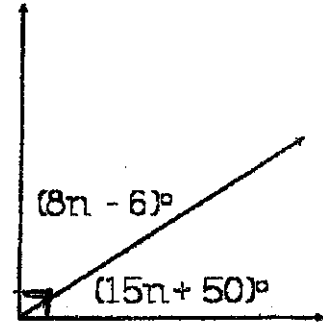
- 1 _____
- 2 _____
- 3 _____
- 4 _____



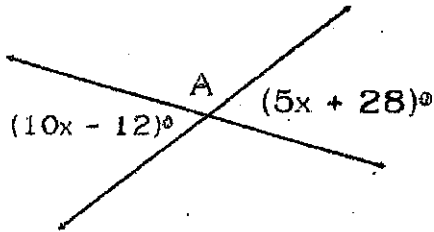
If the measure of an angle is 62° ,
what is the measure of its
supplement?

What is the measure of its
complement?

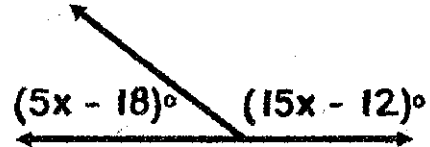
Find the measure of each angle.



Solve for x and then find the measure of
angle A.



FIND THE MEASURE OF EACH ANGLE.

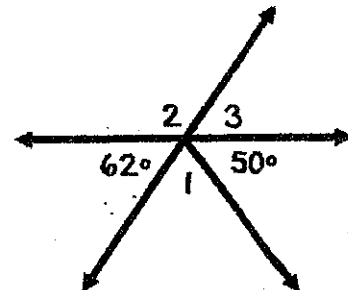


What are complementary angles?

What are supplementary angles?

Solve for each missing angle.

- 1 _____
- 2 _____
- 3 _____

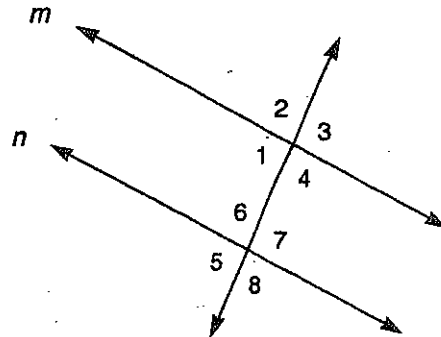


Practice Worksheet 12-4

Parallel Lines

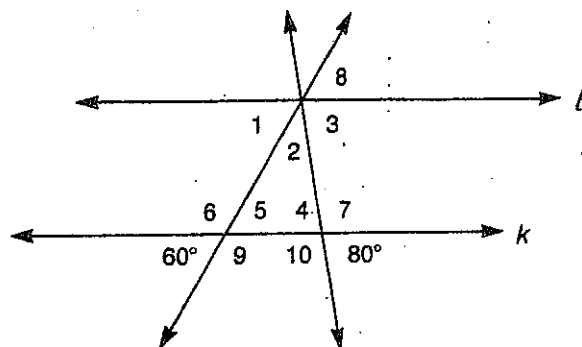
In the figure at the right, m is parallel to n . If the measure of $\angle 3$ is 95° , find the measure of each angle below.

- | | |
|---------------|---------------|
| 1. $\angle 1$ | 2. $\angle 4$ |
| 3. $\angle 5$ | 4. $\angle 6$ |
| 5. $\angle 7$ | 6. $\angle 8$ |
| 7. $\angle 2$ | |



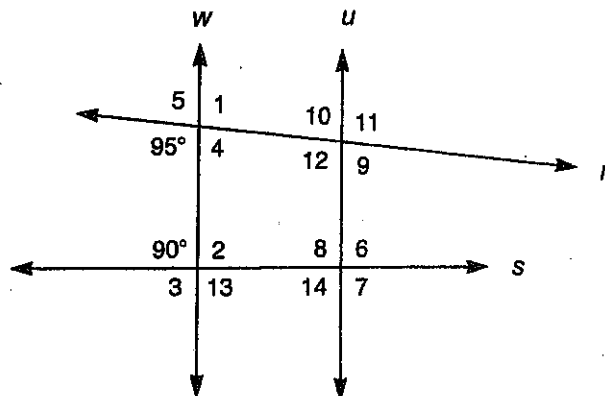
In the figure at the right, l is parallel to k . Find the measure of each angle below.

- | | |
|----------------|-----------------|
| 8. $\angle 5$ | 9. $\angle 4$ |
| 10. $\angle 9$ | 11. $\angle 8$ |
| 12. $\angle 6$ | 13. $\angle 1$ |
| 14. $\angle 7$ | 15. $\angle 3$ |
| 16. $\angle 2$ | 17. $\angle 10$ |



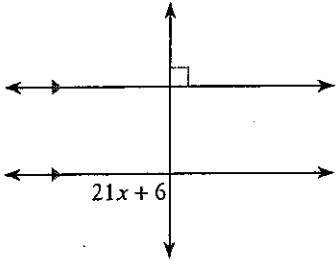
In the figure at the right, w is parallel to u . Find the measure of each angle below.

- | | |
|-----------------|-----------------|
| 18. $\angle 1$ | 19. $\angle 2$ |
| 20. $\angle 3$ | 21. $\angle 12$ |
| 22. $\angle 10$ | 23. $\angle 11$ |
| 24. $\angle 13$ | 25. $\angle 7$ |
| 26. $\angle 6$ | 27. $\angle 8$ |
| 28. $\angle 9$ | 29. $\angle 14$ |
| 30. $\angle 5$ | 31. $\angle 4$ |

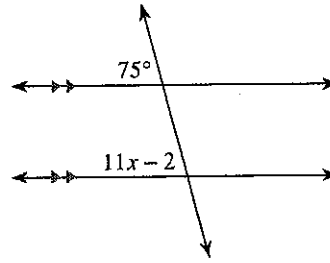


Solve for x .

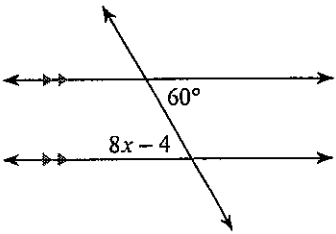
19)



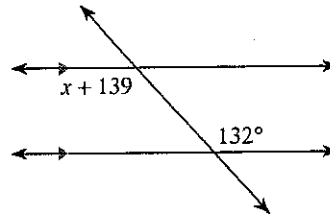
20)



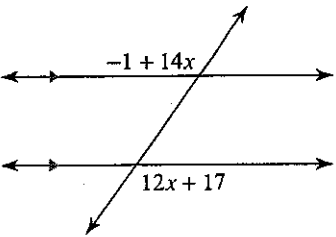
21)



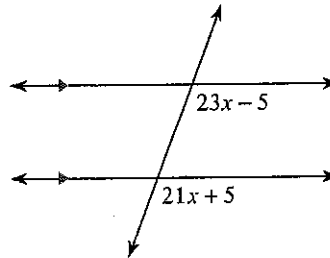
22)



23)

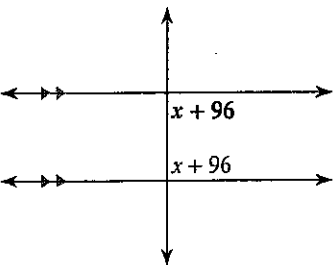


24)

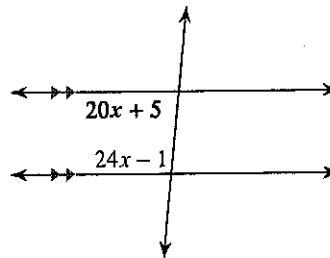


Find the measure of the angle indicated in bold.

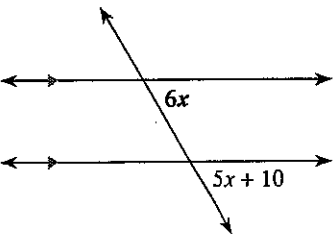
25)



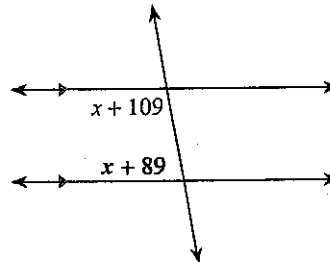
26)



27)

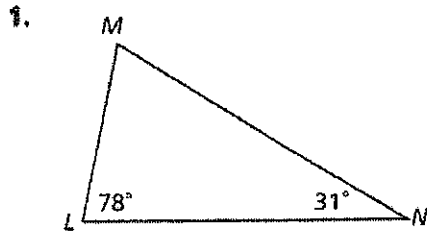


28)

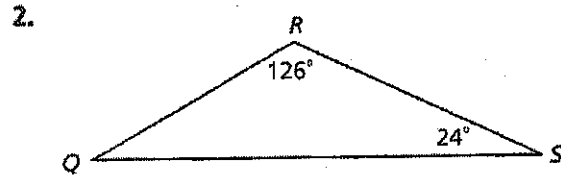


Angle Relationships in Triangle Practice

Find the missing angle measure.

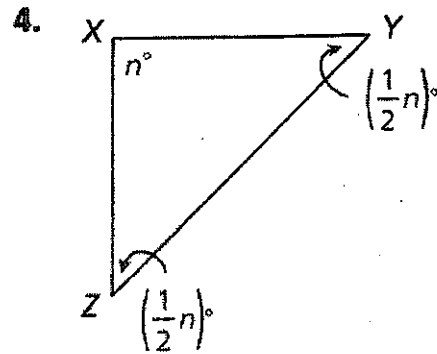
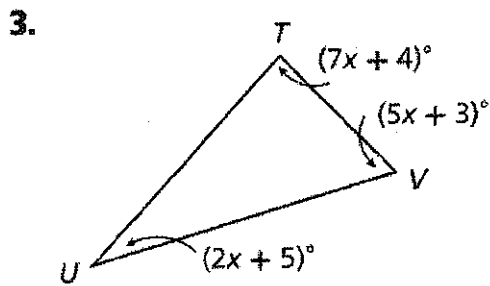


$m\angle M = \underline{\hspace{2cm}}$

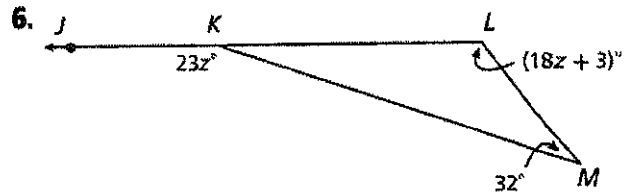
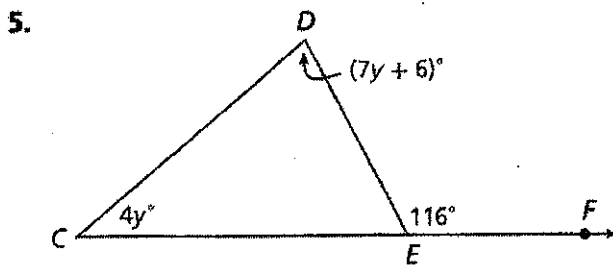


$m\angle Q = \underline{\hspace{2cm}}$

Use the Triangle-Sum Theorem to find x . Then find each angle measure.



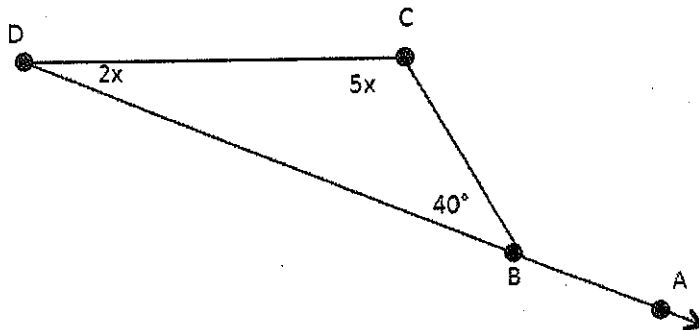
Use the Exterior Angles Theorem to find x . Then find each missing angle measure.



7. $x = \underline{\hspace{2cm}}$

$\angle ABC = \underline{\hspace{2cm}}$

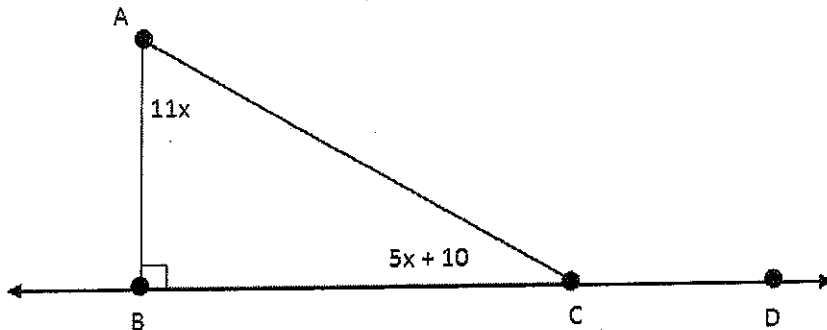
$\angle BCD = \underline{\hspace{2cm}}$



8. $x = \underline{\hspace{2cm}}$

$\angle CAB = \underline{\hspace{2cm}}$

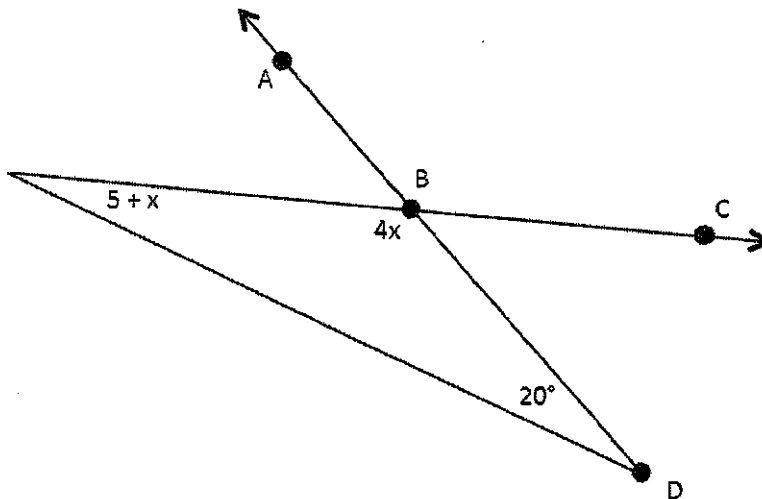
$\angle ACD = \underline{\hspace{2cm}}$



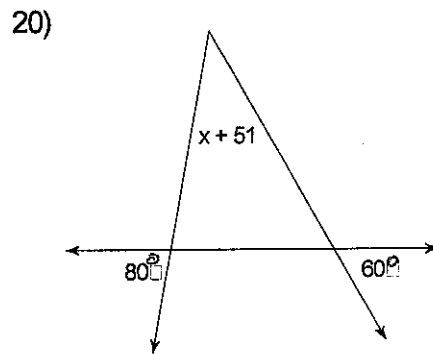
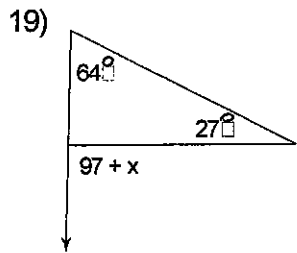
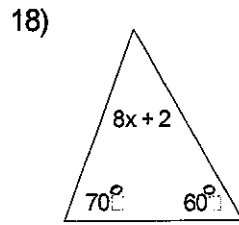
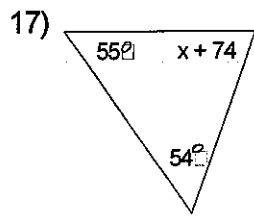
9. $x = \underline{\hspace{2cm}}$

$\angle ABC = \underline{\hspace{2cm}}$

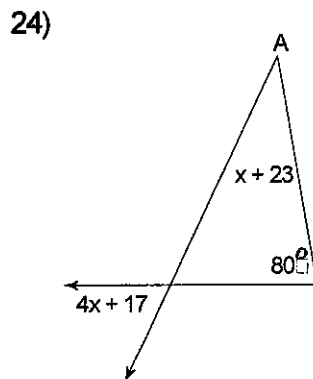
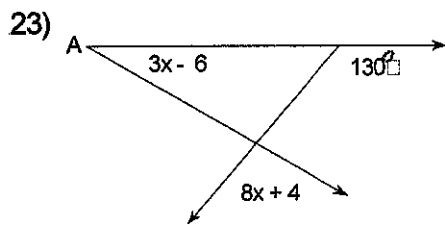
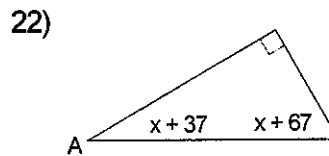
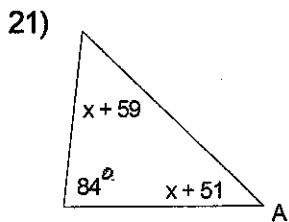
$\angle CBD = \underline{\hspace{2cm}}$



Solve for x.



Find the measure of angle A.



Name _____

Date _____

Enrichment Worksheet 12-4

Parallel Lines

Given: line l parallel to line m ;
 line l perpendicular to line k ;
 $m\angle 1 = 40^\circ$;
 $m\angle 9 = 30^\circ$

Find the measure of each angle.

1. $m\angle 1$
2. $m\angle 2$
3. $m\angle 3$
4. $m\angle 4$
5. $m\angle 5$
6. $m\angle 6$
7. $m\angle 7$
8. $m\angle 8$
9. $m\angle 9$
10. $m\angle 10$
11. $m\angle 11$
12. $m\angle 12$
13. $m\angle 13$
14. $m\angle 14$
15. $m\angle 15$
16. $m\angle 16$
17. $m\angle 17$
18. $m\angle 18$
19. $m\angle 19$
20. $m\angle 20$

