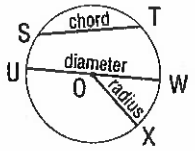
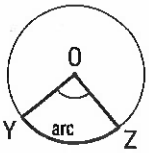
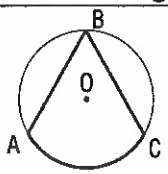
Name _____

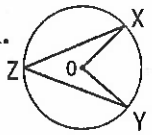
12.8 Angles in a Circle

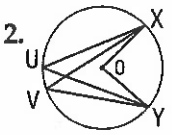
MATHPOWER™ *Nine*, pp. 474–477

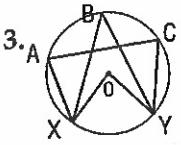
Parts of a Circle	Central Angle	Inscribed Angle
		

The measure of a central angle is twice the measure of an inscribed angle subtended by the same arc.
Inscribed angles subtended by the same arc are equal.
Inscribed angles subtended by a diameter are 90°.

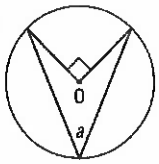
In each diagram, name the inscribed angles and the central angles subtended by arc XY.

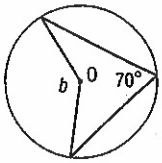
1. 

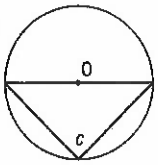
2. 

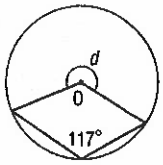
3. 

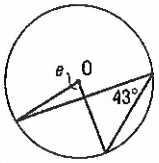
Find the measure of each unknown angle.

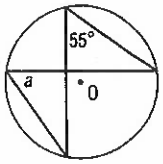
4. 

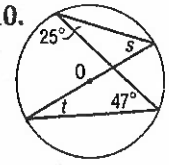
5. 

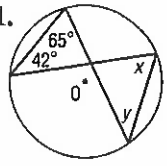
6. 

7. 

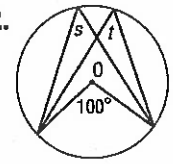
8. 

9. 

10. 

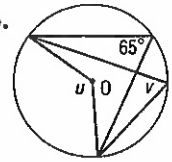
11. 

Find the measure of each unknown angle.

12. 

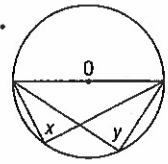
$s =$ _____

$t =$ _____

13. 

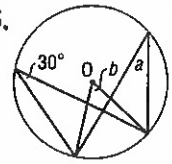
$u =$ _____

$v =$ _____

14. 

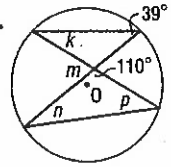
$x =$ _____

$y =$ _____

15. 

$a =$ _____

$b =$ _____

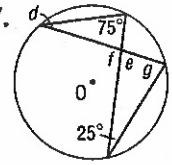
16. 

$k =$ _____

$m =$ _____

$n =$ _____

$p =$ _____

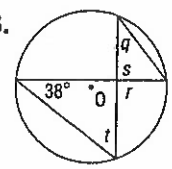
17. 

$d =$ _____

$e =$ _____

$f =$ _____

$g =$ _____

18. 

$q =$ _____

$r =$ _____

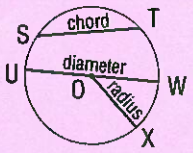
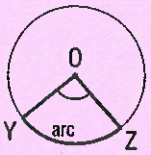
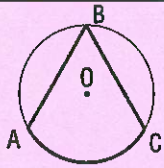
$s =$ _____

$t =$ _____

Name Answer Key 33

12.8 Angles in a Circle

MATHPOWER™ *Nine*, pp. 474–477

Parts of a Circle	Central Angle	Inscribed Angle
		

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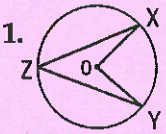
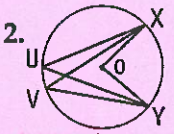
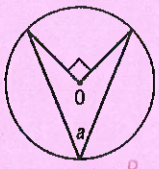
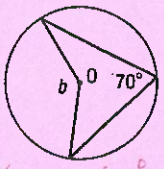
1. 
∠XOY
∠XZY

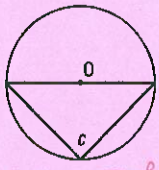
2. 
∠XUY
∠XVY
∠XOY

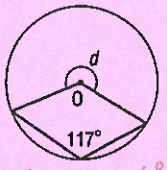
3. 
∠XOY
∠XBY

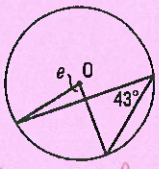
Find the measure of each unknown angle.

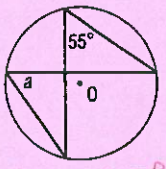
4. 
∠a = 45°

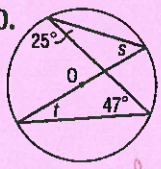
5. 
∠b = 140°

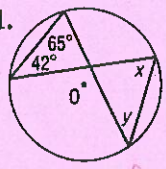
6. 
∠c = 90°

7. 
∠d = 234°

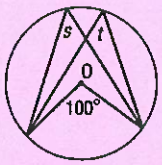
8. 
∠e = 86°

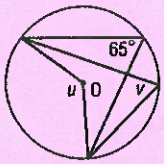
9. 
∠a = 55°

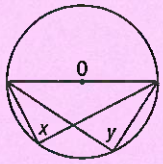
10. 
∠s = 47°
∠t = 25°

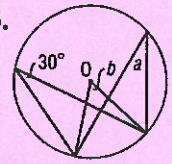
11. 
∠x = 65°
∠y = 42°

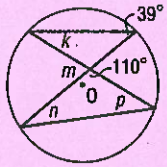
Find the measure of each unknown angle.

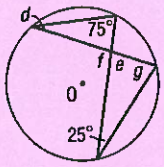
12. 
s = 50°
t = 50°

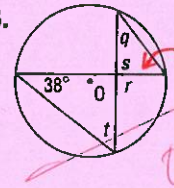
13. 
u = 130°
v = 65°

14. 
x = 90°
y = 90°

15. 
a = 30°
b = 60°

16. 
k = 31°
m = 70°
n = 31°
p = 39°

17. 
d = 25°
e = 80°
f = 100°
g = 75°

18. 
q = 38°
r =
s =
t =

Omit