

1.  $5x + 5 + 10x + 10 = 180$   
 $15x + 15 = 180$   
 $15x = 165$   
 $x = 11$

2.  $4x + 2 = 7x - 4$   
 $6 = 3x$   
 $x = 2$

3.  $\frac{1}{2}bh = \frac{1}{2}(12)(5) = 30$

4.  $\frac{1}{2}(12)(8) = 48$

5.  $\left(\frac{11+7}{2}\right)(4) = 36$

6.  $A = \pi r^2 = \pi(4^2) = 16\pi \text{ yd}^2$

7.  $A = (6)(10)$

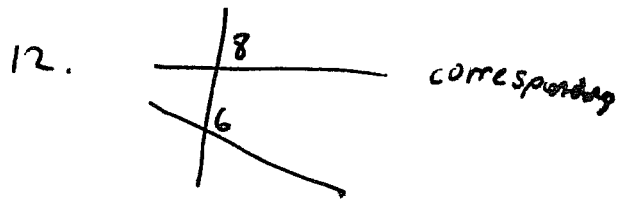
8. A.  $\frac{RS}{RQ}$  B.  $\frac{PS}{PR} = \frac{PT}{PQ}$

9.  $2x + 3x + 7x = 180$   
 $12x = 180$   
 $x = 15$

10. SAS ~ or SSS



Alt Interior



corresponding

13.  $\angle A = \angle B$   
 $4x - 24 = 2x + 4$   
 $2x = 28$       $2(14) + 4 =$   
 $x = 14$       $32$

14. 5-12-13 pyth triple

15. (outside)(whole) = (outside)(whole)  
 $4(4+x) = 6^2$   
 $16 + 4x = 36$   
 $4x = 20$       $x = 5$

16.  $10y = 6y + 12$   
 $4y = 12$   
 $y = 3$

17.  $6(6+4) = 5(x+5)$   
 $60 = 5x + 25$   
 $35 = 5x$   
 $x = 7$

18.  $(x-h)^2 + (y-k)^2 = r^2$   
 $(x+2)^2 + (y-4)^2 = 16$

27.  $6\Delta's = 6(16\sqrt{3}) = 96\sqrt{3}$

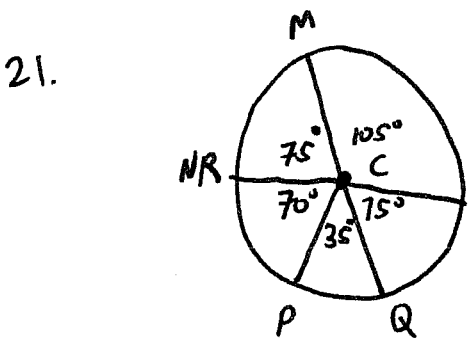
28.  $7:3$

19.  $6x - 2 = 2x + 10$   
 $4x = 12$   
 $x = 3$

29.  $3^2 : 5^2$   
 $9:5$

20.  $(2)(60) = 120^\circ$

30.  $2\pi r = 60$   
 $r = \frac{60}{2\pi} = \frac{30}{\pi} \approx 9.55$



31.  $2\pi r^2 \left(\frac{60}{360}\right) = (2\pi)(9)\left(\frac{1}{6}\right) = 3\pi \approx 9.42$

$\widehat{NQR} = 180^\circ$

32. Square - circle  
 $8^2 - \pi(4)^2 = 64 - 16\pi$

22.  $\widehat{QMR} = 360 - 75 = 285^\circ$

33.  $\left(\frac{10}{2}\right)^2 \sqrt{3} = 25\sqrt{3}$

23.  $\widehat{PRN} = 360 - 70 = 290^\circ$

24.  $AD = \text{radius} = 8$   
 $8 - 15 = 17$

25.  $540 - 105 - 80 - 125 - 90 = x$   
 $x = 140$

26.  $(n-2)180 = 135n$   
 $180n - 360 = 135n$   
 $45n = 360$   
 $n = 8$