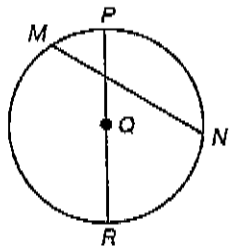
Name _____ Date _____ Class _____

# Cumulative Test 5A

1. (21) Use deductive reasoning to form a "Therefore" concluding statement from the given statements below.

   *All members of the football team attended the awards banquet. Joe is a member of the football team.*

2. (23) Name the circle. Identify a diameter, a radius, and the center of the circle.



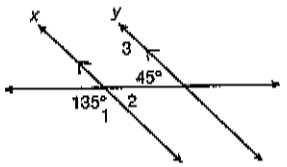

3. (1) Name three collinear points and three noncollinear points in the diagram below.


4. (7) Ben made the conjecture that the expression $2n + 1$ will always result in a prime number. Show that this conjecture is true for $n = 1$, 2, and 3, but not for $n = 4$.

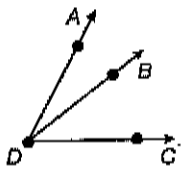
5. (14) Find a counterexample to the conjecture below.

   *If a triangle is isosceles, then it is equilateral.*

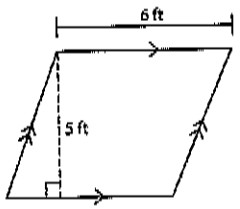
6. (12) Prove that lines $x$ and $y$ in this figure are parallel.



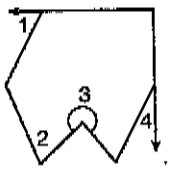

7. (3) $m\angle ADB = 15°$ and $m\angle BDC = 40°$. Find $m\angle ADC$. Classify $\angle ADC$.




8. (22) Find the area of the parallelogram below.



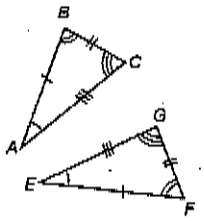

9. (15) For each numbered angle in the polygon, determine whether it is an interior angle or an exterior angle.




10. (8) Use the formula $F° = \frac{9}{5}(C°) + 32°$ to find the temperature in degrees Celsius when it is 68°F.

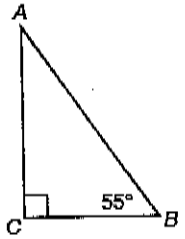
11. *(2)* Jose is walking up a hill toward the top. The distance from the bottom of the hill to the top is 1111 feet. How far will he have walked when he reaches the midpoint of his walk up the hill?

12. *(25)* Identify the corresponding angles and sides for $\Delta ABC$ and $\Delta EFG$.

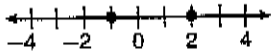



13. *(17)* Consider the conditional statement "If Megan has softball practice, then it is a Tuesday." State the hypothesis and conclusion of this statement and write its converse. If the original statement is true, is the converse true?

14. *(18)* Find the measure of $\angle A$ in $\Delta ABC$.



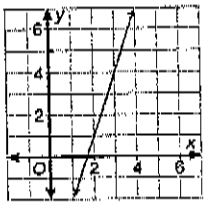

15. *(9)* Find the distance between the points on the number line.




16. *(13)* A triangular garden plot has one side measuring 12.8 feet, a second side measuring 6.8 feet, and a third side measuring 8.9 feet. How much fencing is required to surround the garden plot?

17. *(24)* Solve the equation $3(x + 2) = x + 12$. Provide a justification for each step.

18. *(16)* Find the slope of the line below.




19. *(20)* State the converse of the statement: *If* $x^2 \leq 49$, *then* $x \leq 7$. Determine whether the statement and its converse are true.

20. *(19)* Determine the perimeter and area of the rectangle below.