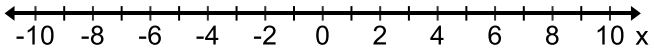
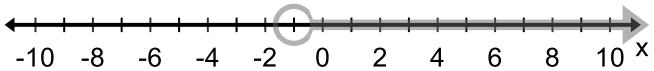
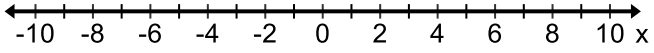
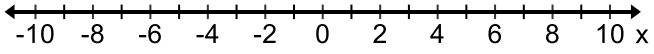
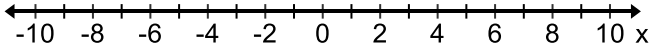
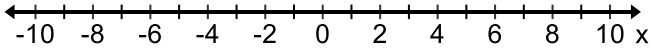
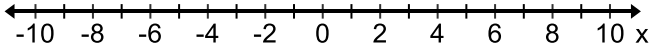
Review #1

Precalculus Review Worksheet #1

Name_____ Date_____ Per_____

Complete the following table.

	Inequality	Graph	Interval Notation
1.			$(-\infty,4)$
2.			
3.	$x > -6$		
4.	$-5 < x \leq 6$		
5.			$[-2,9)$
6.	$x \leq -3$ or $x > 8$		
7.			$(-\infty,1] \cup (3,\infty)$

Convert to inequality notation.

8. $(-4,\ 7]$ 9. $(-15, 8)$ 10. $(-\infty, 2)\ \cup\ [5, \infty)$

Use both inequality and interval notation to describe the set of numbers.

11. Jenny is at least 17 years old.

12. The price of a gallon of gas varies from \$2.85 to \$3.64.

13. No item at the store costs more than \$2.00.

<u>Group Activity:</u> Discuss which algebraic property or properties are illustrated by the equation. Try to reach a consensus.

14. $(3x)y = 3(xy)$ 15. $a^2b = ba^2$ 16. $a(x + y) = ax + ay$

17. $(x + 5)^2 + 0 = (x + 5)^2$ 18. $1(x + y) = x + y$ 19. $\frac{1}{a}(ab) = \left(\frac{1}{a}a\right)b = 1b = b$

Name the quadrant containing the points.

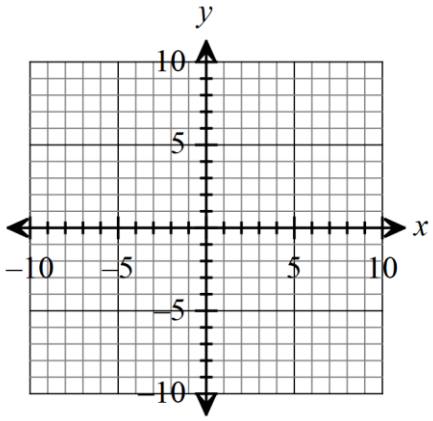
20. $(2, 8)$ 21. $(-4, -9)$ 22. $(3, -2)$ 23. $(0, -7)$

Find the distance between the points.

24. $(-3,-1)\ and (5,-1)$

Find the perimeter of the quadrilateral determined by the points. Give the exact value and round to the nearest hundredths.

25. $(-3,-1),(-1,3),(7,3),(5,-1)$



Find the midpoint of the line segment with the given endpoints.

26. $(-1,3)\ and (5,9)$

27. $\left(3,\sqrt{2}\right)\ and (6,5)$

28. **Let $(4,4)$ be the midpoint of the line segment determined by the points $(1,2)$ and (a,b). Determine a and b.**

Let $P(a,b)$ be a point in the first quadrant.

30. Find the coordinates or the point Q in the fourth quadrant so that PQ is perpendicular to the $x-axis$.

31. Find the coordinates or the point Q in the second quadrant so that PQ is perpendicular to the $y-axis$.

32. Find the coordinates or the point Q in the third quadrant so that the origin is the midpoint of the segment PQ.