2.4 Name_____

1. Each step to solve the equation is shown. Write the reason that justifies <u>each</u> step.

$$3(2x-4) + 2 = 3x - 1$$
$$6x - 12 + 2 = 3x - 1$$
$$6x - 10 = 3x - 1$$
$$6x - 10 - 3x = 3x - 1 - 3x$$
$$3x - 10 = -1$$
$$3x - 10 + 10 = -1 + 10$$
$$3x = 9$$
$$3x/3 = 9/3$$
$$x = 3$$

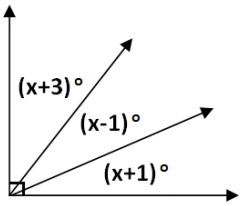
2. Underline the hypothesis once and the conclusion twice: If it is April then it is spring.

a. Write the converse:

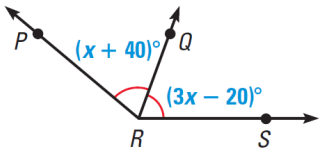
3. Simplify the square roots. Leave answer in simplified radical form. SHOW WORK!

$(3\sqrt{7})^2$ $\sqrt{56}$

4. Find the value of x and each angle.



5. RQ bisects <PRS. Find <PRS



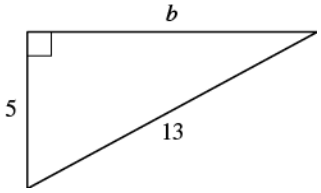
6. Find the distance between G(3,8) and H(-5,-7)

7. Find the midpoint between G(3,8) and H(-5,-7)

8. Draw a ray with endpoint K. Let points B and D be on the ray. Draw segment XY intersecting the ray at point D.

Find the missing side. SHOW ALL WORK!

9.



9a. Find the perimeter of the triangle.

9b. Find the area of the triangle. SHOW WORK!

10. Solve the equation. <u>Show ALL steps and ALL reasons</u>.

4(x-1) = -8

11. How many points are needed for a line?

12. Define perpendicular.

13. Draw the following: adjacent angles linear pair vertical angles

14. Two angles are complementary. One angle is five times the other angle. Find the angles.

15. Draw a line that measures 2 and 7/16 inches. Draw an angle that is 65 degrees.