Week #26 Homework

Name_____

Assignment due Friday!!

Date_____ Period____

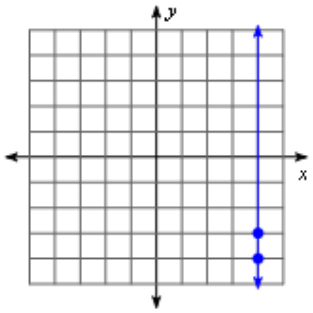
Solve each equation.

1) $-\frac{5}{4}v + 3v = \frac{7}{8}$

2) $6(x+3) - 4 = 6(x-1)$

Find the slope given the following information.

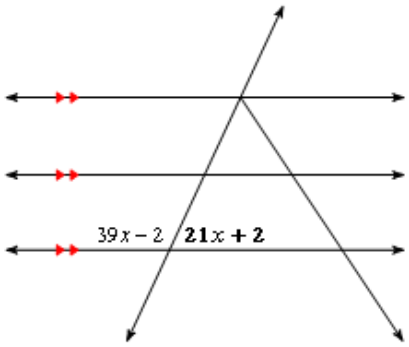
3)



4) $(6, 10), (20, -11)$

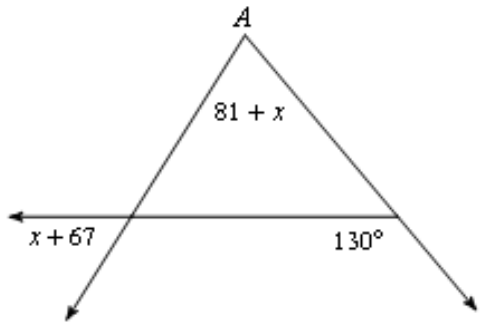
Identify the type of angle pairs and solve for x.

5)



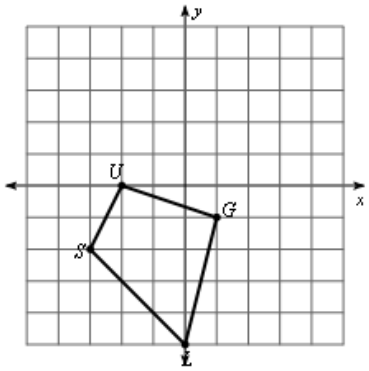
Find the measure of angle A.

6)



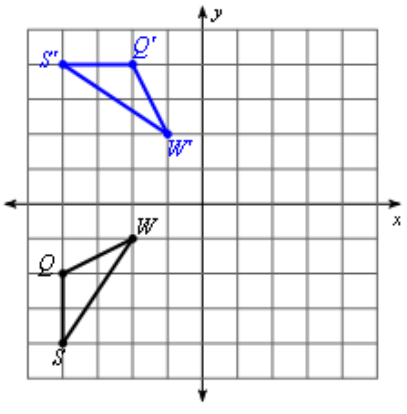
Graph the new image and list the new coordinates.

7) rotation 180° about the origin



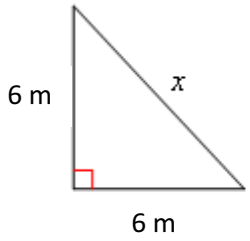
Write a rule to describe each transformation.

8)



Find the missing side of each right triangle. Round to the nearest tenth if necessary.

9)



10) a = 4ft b = 7 ft

Find the volume of each figure in terms of pi and numerically.

11) A cylinder with a radius of 9 cm and a height of 8 cm.

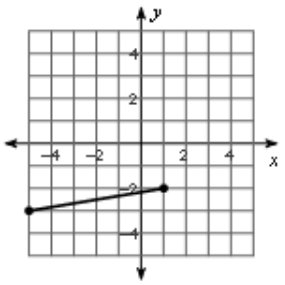
12) A cylinder with a diameter of 12 ft and a height of 9 ft.

13) A cone with diameter 20 cm and a height of 20 cm.

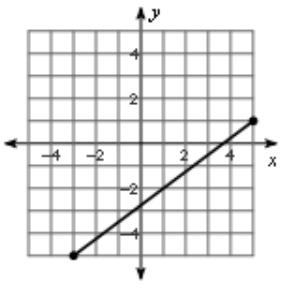
14) A sphere with a diameter of 4 in.

Find the distance between each pair of points.

15)



16)



Find each square root. Round to the nearest tenth if necessary.

17) $\sqrt{140}$

18) $\sqrt{25}$

Find the best solution to the following problems.

19)

$x^3 = 729$

20)

If the area of a square is 100 square centimeters, what is the length of the diagonal?

Simplify each exponential expression.

21) $\dfrac{3^{-4}}{(3^2)^{-2} \cdot 3^4}$

22) $\left(\dfrac{4^4 \cdot 4^{-1}}{4^4}\right)^4$

Write each number in scientific notation.

23) 0.0056

24) 31000

Write each number in standard notation.

25) 7.9×10^2

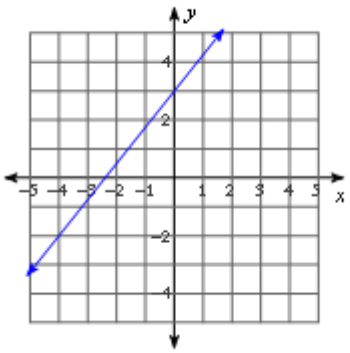
26) 5.4×10^{-2}

Write the slope-intercept form (y = mx + b) of the equation of the line using the following information.

27) through: $(3, 1)$ and $(-1, 4)$

28) through: $(-4, 0)$ and $(-1, -5)$

29)



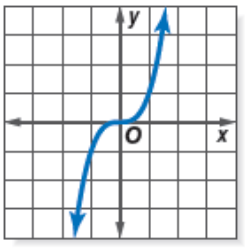
30) Slope $= -\dfrac{5}{4}$, y-intercept $= -2$

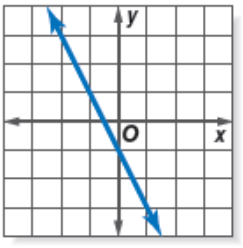
Simplify. Write each answer in scientific notation.

31) $(8.4 \times 10^{-3})(5.5 \times 10^{-3})$

32) $\dfrac{7.68 \cdot 10^2}{6.4 \cdot 10^6}$

Determine if the following are linear or nonlinear. If linear, find the slope and y-intercept, then write the linear equation.

33) 

34) 

35) An airplane 30,000 feet above the ground begins descending at the rate of 2000 feet per minute. Assume the plane continues at the same rate of descent. The plane's height and minutes above the ground are related to each other.

Identify the variables in this situation: x= _____ y= _____

What is the given information in this problem (find all that apply)?

y-intercept: _____ slope: _____ Equation: _____

36) **Use your equation from #35** to find the altitude of the plane after 5 minutes.

37) Suppose you receive $100 for a graduation present, and you deposit it in a savings account. Then each week thereafter, you add $5 to the account but no interest is earned. The amount in the account is a function of the number of weeks that have passed.

Identify the variables in this situation: x= _____ y= _____

What is the given information in this problem (find all that apply)?

y-intercept: _____ slope: _____ Equation: _____

38) **Use your equation from #37** to find when you will have $310 in the account.

39) Abbi had some candy to give to her five children. She first took seven pieces for herself and then evenly divided the rest among her children. Each child received five pieces. With how many pieces did she start?

40) On Tuesday Molly bought six boxes. On Wednesday half of all the boxes that she had were destroyed. On Thursday there were only 15 left. How many did she have on Monday?