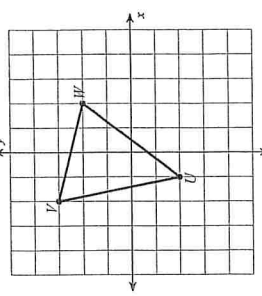
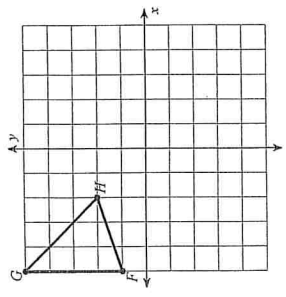


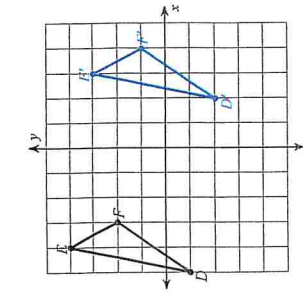
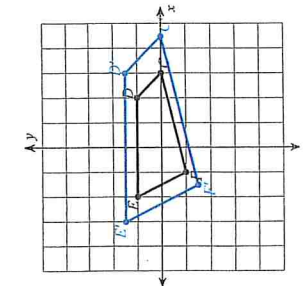
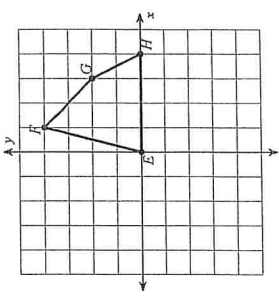
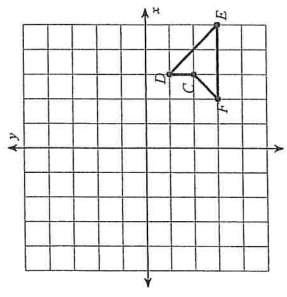
Practice Final

Graph the image of the figure using the transformation given.

- 1) reflection across the y-axis
 2) dilation of $\frac{3}{2}$ about the origin



- 3) rotation 90° clockwise about the origin
 4) translation: 2 units left and 1 unit up

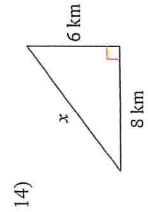
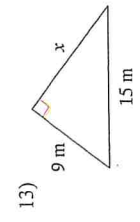


Find the coordinates of the vertices of each figure after the given transformation.

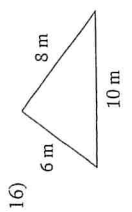
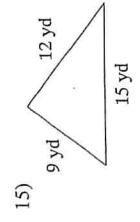
- 9) rotation 180° about the origin
 $V(2, 4), W(5, 5), X(5, 0)$
 10) rotation 90° counterclockwise about the origin
 $Y(1, 1), X(0, 2), W(4, 4), V(4, 0)$

- 11) translation: 2 units right and 4 units up
 $B(-3, -4), C(-4, 1), D(0, 0)$
 12) reflection across the y-axis
 $T(-5, 4), U(-2, 5), V(-1, 2)$

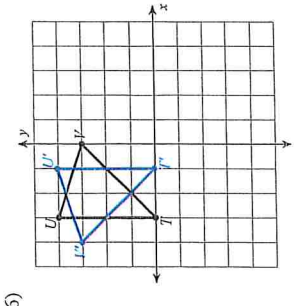
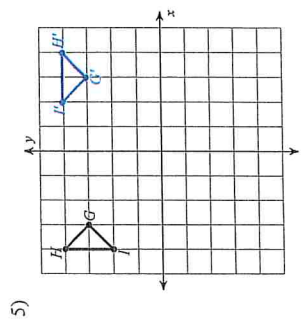
Find the missing side of each triangle. Round your answers to the nearest tenth if necessary.



State if each triangle is a right triangle.



Write a rule to describe each transformation.



Simplify. Your answer should contain only positive exponents.

23) $\frac{6x^{-2}}{3x^{-2}}$

24) $\frac{2n^3}{-6n^0}$

25) $-6x^0 \cdot -6x^0$

26) $2x^{-2} \cdot -3x^{-1} \cdot 6x^2$

27) $(x^3)^{-1}$

28) $(-2x^3)^{-3}$

Solve each equation.

29) $21 = 8 + 5x + 3$

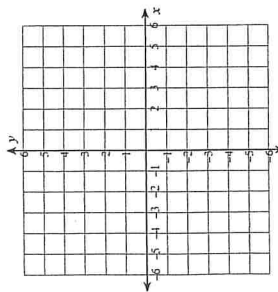
30) $-9 - 3n + 8n = 5 - 2n - 7$

31) $5(8r + 5) = -23 - 8r$

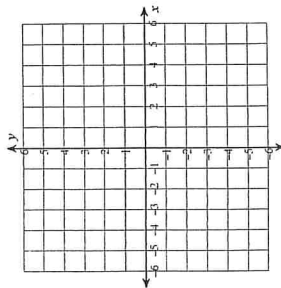
32) $-2n - 1\frac{1}{4}n = -5\frac{1}{5}$

Sketch the graph of each line.

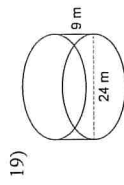
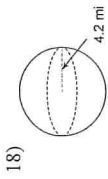
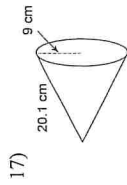
33) $y = \frac{5}{4}x + 2$



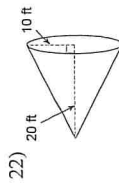
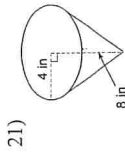
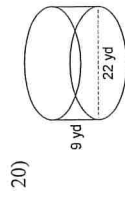
34) $y = -5x + 5$



Find the surface area of each figure. Round your answers to the nearest hundredth, if necessary.



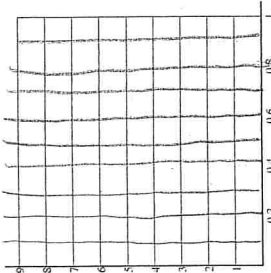
Find the volume of each figure. Round your answers to the nearest hundredth, if necessary.



Construct a scatter plot. State if there appears to be a positive correlation, negative correlation, or no correlation. When there is a correlation, identify the relationship as linear or nonlinear. If it is a linear relationship, find the slope-intercept form of the equation of the line that best fits the data.

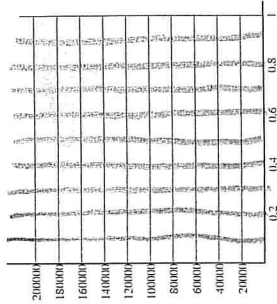
43)

X	Y	X	Y
0.65	3	0.61	4
0.02	9	0.26	6
0.69	3	0.99	1
0.14	8		



44)

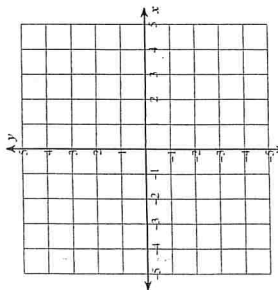
X	Y	X	Y
0.1	1	0.3	15
0.3	10	0.1	1
0.6	1,007	0.9	54,244
0.9	59,415	0.4	45
1	212,688	0.4	69



Solve each system by graphing.

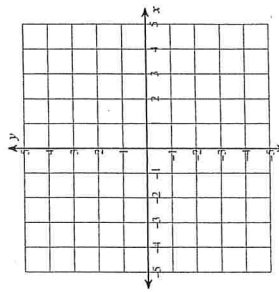
45) $y = \frac{1}{3}x - 2$

$y = -\frac{5}{3}x + 4$

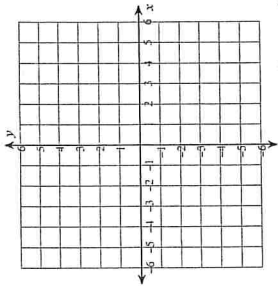


46) $y = 2x - 2$

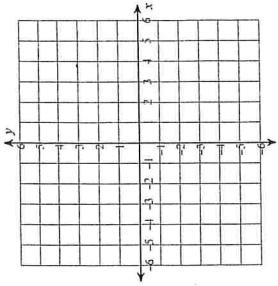
$y = \frac{1}{3}x + 3$



35) $4x - 5y = 0$

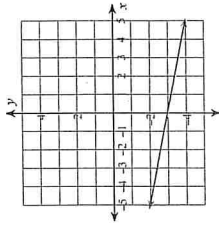


36) $3x + 4y = 8$

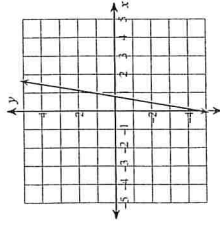


Write the slope-intercept form of the equation of each line.

37)



38)



Write the slope-intercept form of the equation of each line.

39) Slope = $-\frac{1}{3}$, y-intercept = 4

40) Slope = $-\frac{1}{2}$, y-intercept = -5

41) $2x - y = 1$

42) $11x - 8y = -48$

Solve each system by substitution.

47) $y = -1$
 $-7x - 6y = -22$

48) $6x - 4y = -4$
 $y = -5$

49) Jimmy spent \$460 on books. Math books cost \$60 and science books cost \$80. If he bought a total of 7, then how many of each kind did he buy?

50) Molly spent \$140 on shirts. Fancy shirts cost \$23 and plain shirts cost \$8. If she bought a total of 10, then how many of each kind did she buy?