

Review WS 1**Alg 1****1. Evaluate the expression for the given values of the variables.**

a. $\frac{5}{6} \cdot x$ when $x = \frac{3}{2}$

d. $\frac{b}{8} + 15$ when $b = 256$

b. $\frac{7}{8} - t$ when $t = \frac{3}{16}$

e. $x - y^2$ when $x = 26$ and $y = 5$

c. $24 - 3a^3$ when $a = 2$

f. $(b - a)^5$ when $a = 4$ and $b = 10$

2. Evaluate.

a. $\left[15 + (5^2 \cdot 2)\right] + 13$

b. $\frac{(37 - 26)^2 - 6}{32 + 2^2 - (4^2 - 13)}$

3. The formula for the volume of a pyramid is $\frac{1}{3}$ times the height times the area of the base. If a pyramid is 150 feet high and 250 feet along each side of its square base, what is the pyramid's volume?

4. Check whether the given number is a solution of the equation or inequality.

a. $4x - 3x = \frac{9}{x}; 3$

b. $\frac{40 - x}{x} \geq 4; 8$

5. If it takes you one hour and forty-five minutes to drive 105 miles, find your average speed.

6. If you invested \$1500 in a bank account for 5 years and received \$150 in simple interest, what was the annual interest rate for the account?

7. Tell whether the pairing is a function.

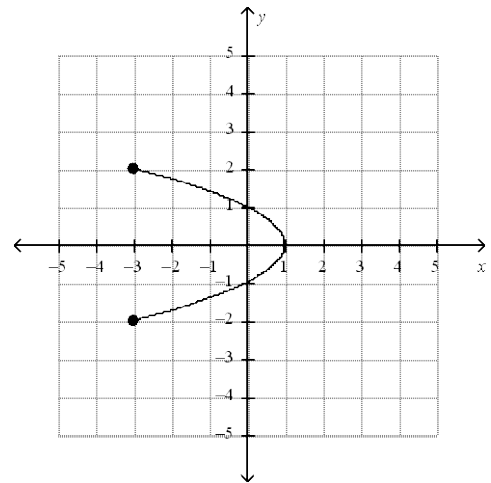
a.

Input	Output
0.1	0.1
0.2	0.4
0.3	0.9
0.4	0.1

b.

Input	Output
50	50
60	50
60	40
80	40

8. Does the graph represents a function? Why or why not?



9. Write the verbal sentence as an equation or an inequality.

a. The quotient of x and eleven is less than or equal to fifty-seven.

b. Twenty-seven is greater than the sum of x minus five and twelve.

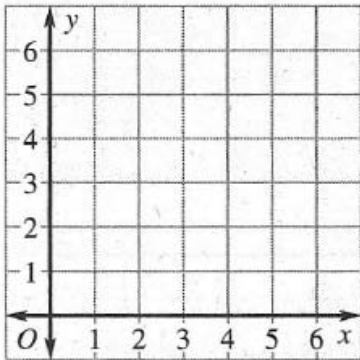
10. Write an equation or inequality to model the situation.

- a. The total cost C of an item is equal to the sum of the price p and the quantity 0.06 multiplied by p .
- b. The length C of the Colorado River is greater than three times the length r of the Connecticut River.
- c. The area A of a triangle is equal to one-half times the product of the base b and the height h .

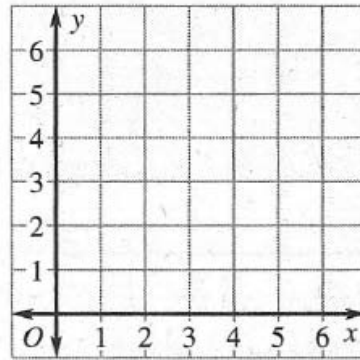
11. Make an input-output table for the function.

Graph the function. Use 0.5, 1, 1.5, and 2 as the domain.

a. $y = 1.5x - 0.25$



b. $y = \frac{x}{0.5} - 0.75$



12. Write a rule for the function.

a.

Input, x	0	1	2	3
Output, y	6	7	8	9

b.

Input, x	0.1	0.2	0.3	0.4
Output, y	10	20	30	40

c.

Input, x	2	4	6	8
Output, y	0.8	1.6	2.4	3.2