Algebra 1 Quick Quiz

November 2, 2021

1

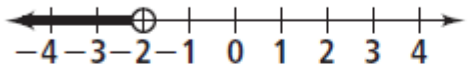
Which function does the table represent?

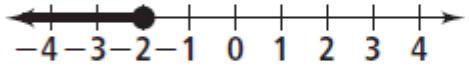
x	−2	−1	0	1	2
y	4	5	6	7	8

A $y = -2x$
B $y = -5x$
C $y = x + 6$
D $y = -x + 2$

2

Which of the following is the graph of the solution to the inequality $-2x + 5 > 9$?

A


B


C


D


3. When $3a + 7b > 2a - 8b$ is solved for a, the result is

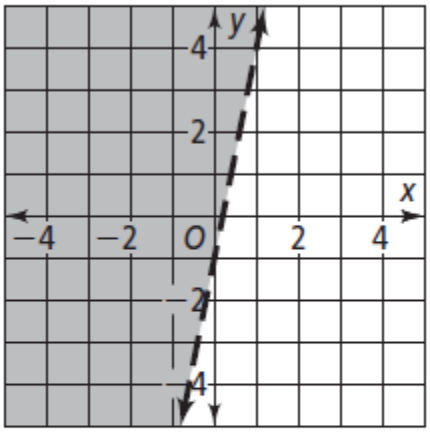
(1) $a > -b$

(2) $a < -b$

(3) $a < -15b$

(4) $a > -15b$

4. The graph of which inequality is shown?



A $y > 5x - 1$

B $y \geq 5x - 1$

C $y < 5x - 1$

D $y \leq 5x - 1$

5. Solve the equation $x^2 - 4 = x + 8$.

A $3, 4$

B $3, -4$

C $-3, 4$

D $-3, -4$

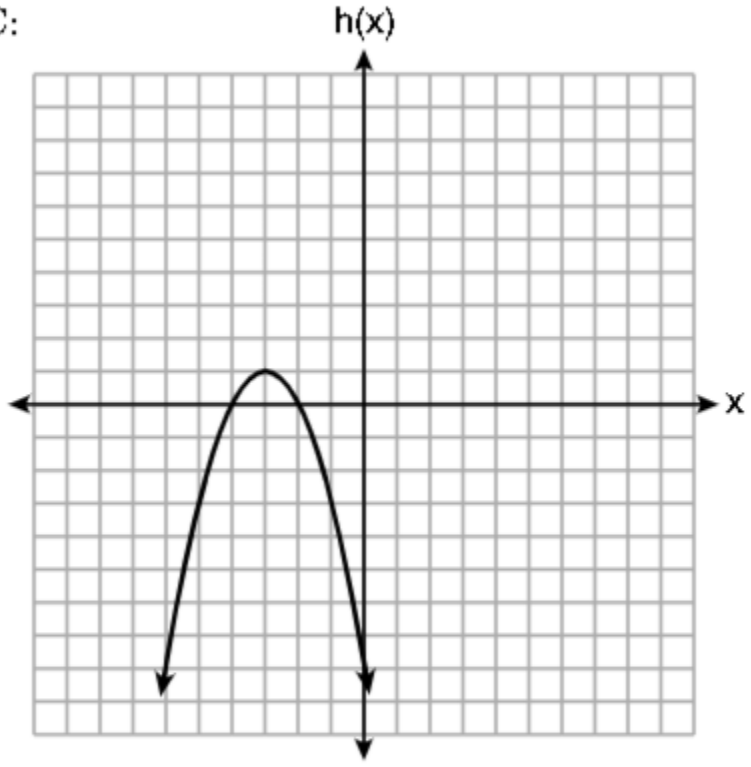
6.

Three functions are shown below.

A: $g(x) = -\frac{3}{2}x + 4$

B: $f(x) = (x + 2)(x + 6)$

C:



Which statement is true?

(1) B and C have the same zeros.

(2) A and B have the same y-intercept.

(3) B has a minimum and C has a maximum.

(4) C has a maximum and A has a minimum.

7.

What type of function is $f(x) = x^2 + 3x - 2$?

A exponential
B linear
C quadratic
D none of the above

8.

Evaluate $m + m^2 + 2b^3$ for $m = 4$ and $b = 0$.

F 12
G 14
H 20
J 22

9.

Solve $5x^2 = 180$ algebraically.

10.

Determine and state the vertex of $f(x) = x^2 - 2x - 8$

BONUS

11.

Which of the following is equivalent to the expression below?

$$x^2 + 7x - 60$$

A. $(x + 12)(x - 5)$

B. $(x + 10)(x - 6)$

C. $(x + 15)(x - 4)$

D. $(x + 20)(x - 3)$

High School Mathematics Assessment Reference Sheet

1 inch = 2.54 centimeters
1 meter = 39.37 inches
1 mile = 5280 feet
1 mile = 1760 yards
1 mile = 1.609 kilometers

1 kilometer = 0.62 mile
1 pound = 16 ounces
1 pound = 0.454 kilograms
1 kilogram = 2.2 pounds
1 ton = 2000 pounds

1 cup = 8 fluid ounces
1 pint = 2 cups
1 quart = 2 pints
1 gallon = 4 quarts
1 gallon = 3.785 liters
1 liter = 0.264 gallons
1 liter = 1000 cubic centimeters

Triangle	$A = \frac{1}{2}bh$
Parallelogram	$A = bh$
Circle	$A = \pi r^2$
Circle	$C = \pi d \text{ or } C = 2\pi r$
General Prisms	$V = Bh$
Cylinder	$V = \pi r^2 h$
Sphere	$V = \frac{4}{3}\pi r^3$
Cone	$V = \frac{1}{3}\pi r^2 h$
Pyramid	$V = \frac{1}{3}Bh$

Quadratic Formula	$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$
Arithmetic Sequence	$a_n = a_1 + (n-1)d$
Geometric Sequence	$a_n = a_1 r^{n-1}$
Geometric Series	$S_n = \frac{a_1 - a_1 r^n}{1-r}$ where $r \neq 1$
Radians	1 radian $= \frac{180}{\pi}$ degrees
Degrees	1 degree $= \frac{\pi}{180}$ radians