

Warm Up

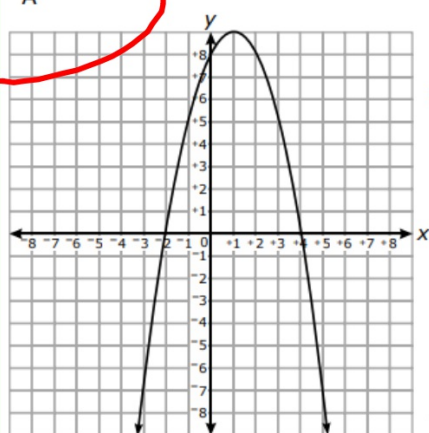
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#1- 8 on EOC Released Test

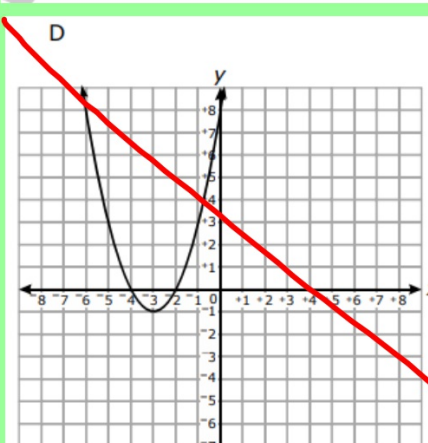
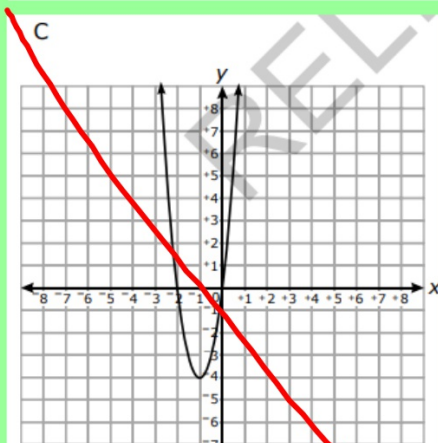
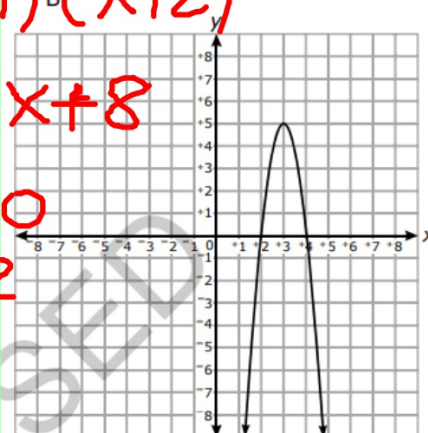
Calculator Inactive Section

1 Which choice is the graph of $y = (4 - x)(x + 2)$?

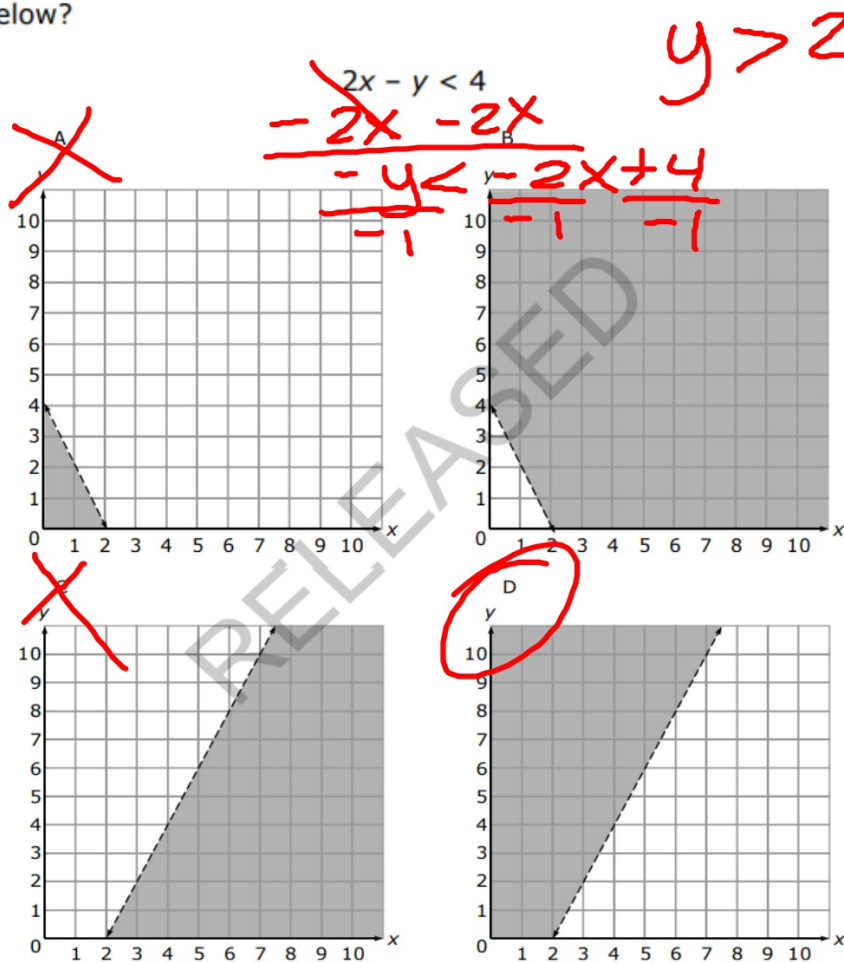
A



$(-x+4)(x+2)$
 $-x^2+2x+8$
 $x+2=0$
 $x=-2$



2 In which graph does the shaded region represent the solution set for the inequality shown below?



3 Which expression is equivalent to $(x + 2)(3x - 3)$?

A $3x^2 - 6$

B $3x^2 + 3x - 6$

C $3x^2 + 6x - 6$

D $3x^2 + 9x - 6$

	x	$+ 2$
$3x$	$3x^2$	$6x$
-3	$-3x$	-6

$$3x^2 + 3x - 6$$

4 A line, $y = mx + b$, passes through the point $(1, 6)$ and is parallel to $y = 4x + 6$. What is the value of b ?

Perpendicular.

$$m = 4 \quad (1, 6)$$

$$y = mx + b$$

$$6 = 4(1) + b$$

$$6 = 4 + b$$

$$b = -2$$

$$m = -\frac{1}{4} \quad (1, 6)$$

$$y = mx + b$$

$$6 = -\frac{1}{4}(1) + b$$

$$6 = -\frac{1}{4} + b$$

$$+\frac{1}{4} \quad +\frac{1}{4}$$

$$b = \frac{25}{4}$$

5 Two functions are shown below.

$$f(x) = \frac{1}{2} \cdot 2^x \text{ exp.}$$

$$g(x) = 5x + 2 \text{ linear}$$

What is the largest integer value of x such that $f(x) \leq g(x)$?

x	$f(x)$	$g(x)$
1	1	7
2	2	12
3	4	17
4	8	22
5	16	27
6	32	32
7	64	37

6

- 6 A company models its net income, in thousands of dollars, with the function $f(x) = 9x^2 - 54x - 144$, where x is the number of units of its product sold. How many units of its product does the company need to sell in order for the net income to equal \$0?

$$9x^2 - 54x - 144 = 0$$

$$9(x^2 - 6x - 16) = 0$$

$$(x^2 - 8x + 2x - 16) = 0$$

$$(x-8)(x+2) = 0$$

$$(x+2)(x-8) = 0$$

$$x+2=0$$
$$x=-2$$

$$x-8=0$$
$$x=8$$

$$ac = -16$$
$$\frac{-8 \pm 2}{2}$$

7 Joanna has a total of 50 coins in her purse.

- The coins are either nickels or quarters.
- The total value of the coins is \$7.10.

Which system of equations can be used to determine the number of nickels, n , and quarters, q , that Joanna has in her purse?

A $n + q = 50$
 $0.05n + 0.25q = 7.10$

B $n + q = 7.10$
 $50n + 50q = 7.10$

C $0.05n + 0.25q = 50$
 $n + q = 7.10$

D $0.05n + 0.25q = 7.10$
 $50n + 50q = 7.10$

8 The function $f(x) = -0.25x + 5$ models the height of a candle x seconds after it is lit. What is the meaning of the y -intercept of the function?

A the initial height of the candle

B the final height of the candle

C the rate at which the candle is burning **SLOPE**

D the amount of time it will take the candle to burn

