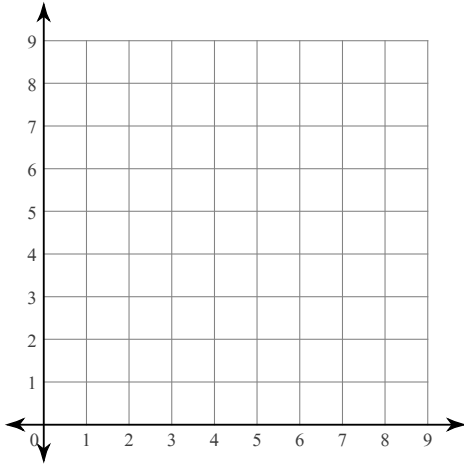


CRT REVIEW 2

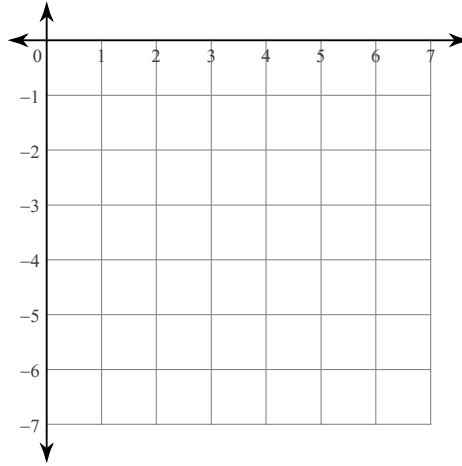
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A) Sketch the graph of each function. B) Give the Domain C) Give the RANGE of each function. C) Give the VERTEX for each graph

1) $y = x^2 - 8x + 20$



2) $f(x) = -(x - 4)^2 - 2$

**Solve each equation..**

3) $k^2 + k - 72 = 0$

4) $5x^2 + 4x + 10 = 11$

5) $m^2 + 14m + 10 = 7m$

6) $2n^2 - 9n + 11 = 0$

7) Jasmine's school is selling tickets to a play. On the first day of ticket sales the school sold 11 adult tickets and 10 student tickets for a total of \$216. The school took in \$99 on the second day by selling 14 adult tickets and 1 student ticket. What is the price each of one adult ticket and one student ticket?

8) Paul and Abhasra each improved their yards by planting daylilies and geraniums. They bought their supplies from the same store. Paul spent \$108 on 6 daylilies and 10 geraniums. Abhasra spent \$102 on 9 daylilies and 5 geraniums. What is the cost of one daylily and the cost of one geranium?

Find the inverse of each function.

9) $g(x) = -3x + 1$

10) $f(x) = \frac{-6 - 2x}{3}$

Perform the indicated operation.

11) $f(n) = n^2 - 3$
 $g(n) = 2n - 1$
 Find $(f + g)(n)$

12) $g(x) = x^2 - 2$
 $f(x) = 4x + 2$
 Find $(g + f)(x)$

13) $h(a) = a^2 - 4$
 $g(a) = 3a + 2$
Find $(h - g)(a)$

14) $h(x) = 4x + 3$
 $g(x) = x^2 - 4x$
Find $(h \cdot g)(x)$

15) $h(a) = 2a + 5$
 $g(a) = a + 4$
Find $\left(\frac{h}{g}\right)(a)$

16) $g(n) = n^2 + 3$
 $h(n) = 2n - 2$
Find $(g \circ h)(n)$

17) $g(x) = x - 2$
 $f(x) = 2x - 2$
Find $(g \circ f)(x)$

18) $g(a) = -4a - 1$
 $f(a) = -3a - 5$
Find $(2g - 5f)(a)$

Simplify each expression.

19) $\frac{3}{x+5} + \frac{6}{x-4}$

20) $\frac{4}{n+5} - \frac{3}{n-3}$

Solve each equation.

21) $3^{2a-3} = 9$

Solve each equation. Round your answers to the nearest ten-thousandth.

22) $8 \cdot 11^{4a} = 6$

Condense each expression to a single logarithm.

23) $6 \log_8 u + 3 \log_8 v$

Expand each logarithm.

24) $\log_5 (ab^3)^4$

Sketch the graph of each function.

25) $y = 4 \cdot 2^x$

