Mod 2 Test Review 2
Math 2

Name Key
Date _____ Period _____

1) $f(x) = x^2 + 13x - 14$

Factored form:
$(x+14)(x-1)$

Vertex form:
$(x+6.5)^2 - 56.25$

Vertex: $(-6.5, -56.25)$
Equation of Axis of Sym. $x = -6.5$
Y-intercept: $(0, -14)$
x-intercept(s): $(-14, 0)$ $(1, 0)$

2) $f(x) = x^2 - 2x + 24$

Factored form:
$(x+4)(x-6)$

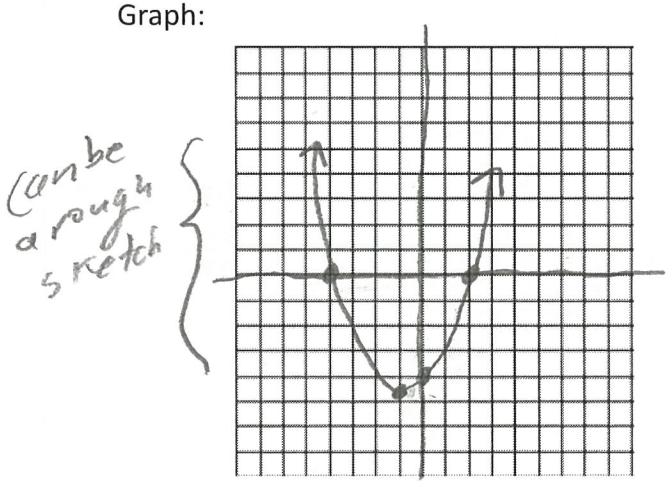
Vertex form:
$(x-1)^2 + 23$

Vertex: $(1, 23)$
Eq. of Axis of Sym. $x = 1$
y-intercept: $(0, 24)$
x-intercepts $(-4, 0)$ $(6, 0)$

3) $f(x) = \frac{1}{2}(x+4)(x-2)$

x-intercepts: $(-4, 0)$ $(2, 0)$
y-intercept: $(0, -4)$
Vertex: $(-1, -4.5)$
Equation of Axis of sym. $x = -1$

Graph:

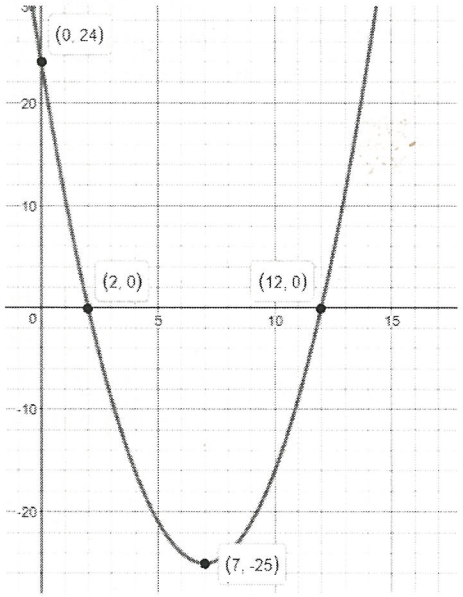


4) Factor: $x^2 + 10x - 75$
$(x+15)(x-5)$

5) Factor: $4x^2 + 8x - 5$
$(2x+5)(2x-1)$

6) Factor: $3x^2 - 75$
$3(x+5)(x-5)$

7) Use the graph to write the equation in:



Vertex form: $(x-7)^2-25$

Factored form: $(x-2)(x-12)$

Standard form: $x^2-14x+24$

8) In a basic square, one side was increased by 1 and the other side was increased by 3, and finally, the area was multiplied by 3. Write the equation in: Diagram

a) Factored form:

$3(x+1)(x+3)$

b) Standard form:

$3x^2+12x+9$

c) Vertex form:

$3(x^2+2)^2-3$

d) Describe the transformation to obtain this graph from the parent graph $f(x) = x^2$.

stretch 3

Vertex (-2, -3)

AoS: $x=-2$

shifts

$\leftarrow 2, \downarrow 3$

narrow