Transformations Worksheet **Name**_____ **Date**_____ **Period**____

Write the equation of the transformed function, *f(x).*

1) Absolute value: vertical shift down 5, horizontal shift right 3: _____

2) Linear: vertical shift up 5: _____

3) Square Root: vertical shift down 2, horizontal shift left 7: _____

4) Quadratic: horizontal shift left 8: _____

5) Quadratic: vertex at (−5, −2): _____

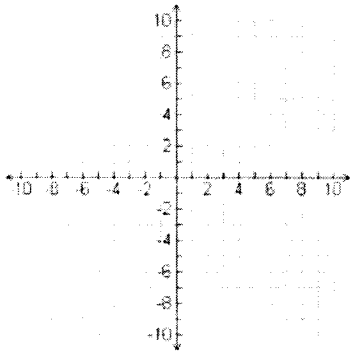
State the parent function and describe the transformation represented. Then sketch the graph.

6) $f(x) = x^2 - 6$

Parent: _____

Transformations:

_____

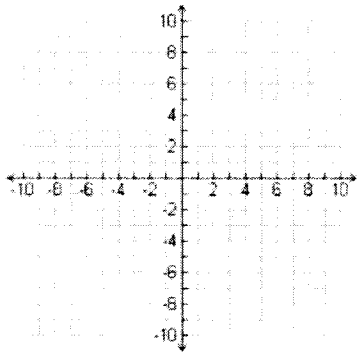


7) $f(x) = (x - 1)^2$

Parent: _____

Transformations:

_____

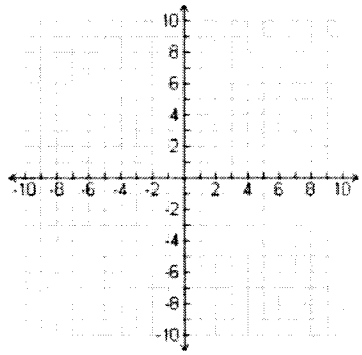


8) $g(x) = (x + 1)^2 + 3$

Parent: _____

Transformations:

_____

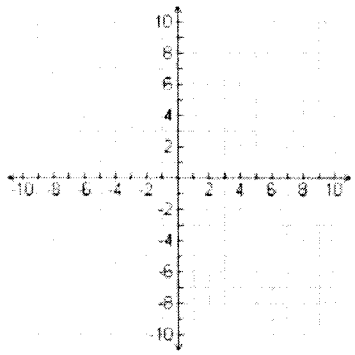


9) $f(x) = x - 2$

Parent: _____

Transformations:

_____

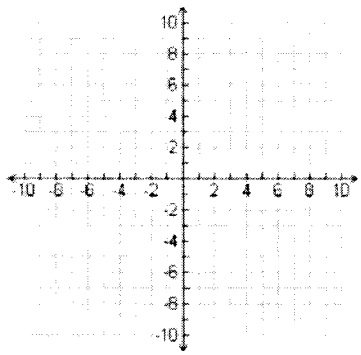


10) $f(x) = x^2 + 2$

Parent: _____

Transformations:

_____

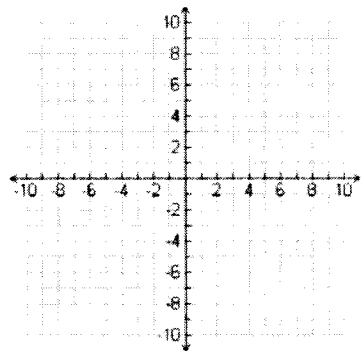


11) $g(x) = 3(x + 1)^2$

Parent: _____

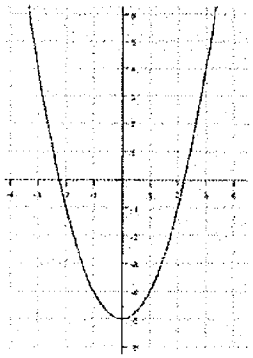
Transformations:

_____

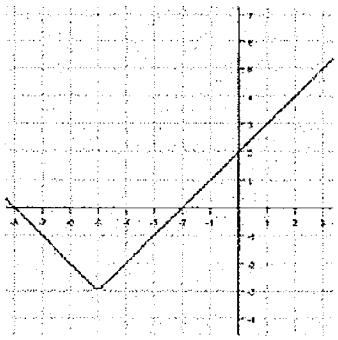


Write the equation for the following translations of their particular parent graphs. You may use y= or function notation (the f(x) type notation).

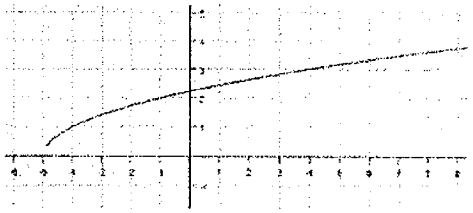
12) _____



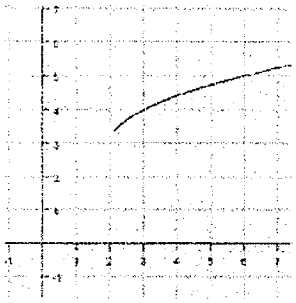
13) _____



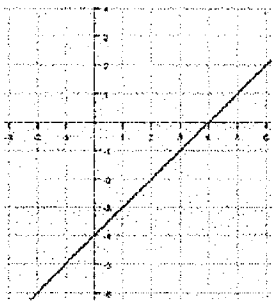
14) _____



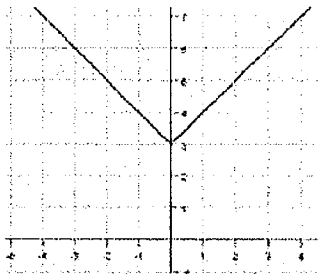
15) _____



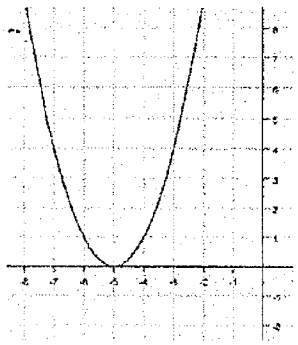
16) _____



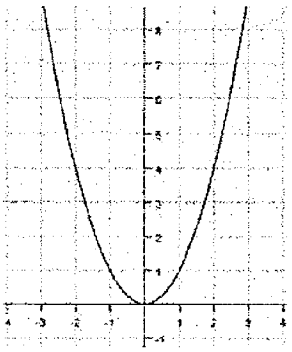
17) _____



18) _____



19) _____



20) _____