$\qquad$
Factor each quadratic completely, some may not be factorable.

1. $3 x^{3}-5 x^{2}+2 x$
2. $7 x^{2}-32 x-60$
3. $7 x^{2}+9 x$
4. $x^{2}-7 x-18$
5. $9 x^{2}-5 x-10$
6. $16 m^{2}+24 m+9$
7. Look back at problem \#1, set the factored form equal to zero. What are the possible values of $x$ ?
8. Look back at problem \#2, set the factored form equal to zero. What are the possible values of $x$ ?
$\qquad$
9. Consider the quadratic $y=x^{2}-2 x-15$
a. Fill in the table

| $x$ | $y$ |
| :---: | :---: |
| -4 |  |
| -3 |  |
| -1 |  |
| 0 |  |
| 1 |  |
| 3 |  |
| 5 |  |

b. Sketch the graph
c. Describe the shape, $x$ intercepts, $y$ intercept, line of symmetry and anything else you can about the graph.

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