| Graph | Description | Equation |
| :---: | :---: | :---: |
| G1 | D | E |
| G2 | D__ | E |
| G3 | D |  |
| G4 | D |  |
| G5 | D |  |
| G6 | D__ |  |
| G7 | D |  |
| G8 | D |  |
| G9 | D |  |
| G10 | D__ | E |
| G11 | D__ | E |
| G12 | D__ |  |


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| :---: | :---: | :---: |
| G1 | D |  |
| G2 | D |  |
| G3 | D |  |
| G4 | D |  |
| G5 | D |  |
| G6 | D |  |
| G7 | D |  |
| G8 | D |  |
| G9 | D |  |
| G10 | D | E |
| G11 |  |  |
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| G1 | D_ | E |
| G2 | D |  |
| G3 | D__ | E |
| G4 | D |  |
| G5 | D |  |
| G6 | D |  |
| G7 | D__ | E |
| G8 | D | E |
| G9 | D | E |
| G10 | D | E |
| G11 | D__ | E_ |
| G12 | D | E |


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| :---: | :---: | :---: |
| G1 | D |  |
| G2 | D |  |
| G3 | D |  |
| G4 | D |  |
| G5 | D |  |
| G6 | D |  |
| G7 | D |  |
| G8 | D |  |
| G9 | D |  |
| G10 | D |  |
| G11 | D |  |
| G12 | D |  |

D1. The graph has a triple root at $x=-3$, a single root at $x=0$, and a double root at $x=1$

D4. The graph has single roots at $x=-1.5$ and $x=2$ and a triple root at $x=0$.

D7. The graph has double roots at $x=2$ and $x=5$. There is a single root at $x=1$.

D10. The graph has single roots at $\mathrm{x}=-3$ and $\mathrm{x}=2$.

## E1.

$(x+3)^{2}(x-.5)^{2}(x-3)^{2}$

E4.
$x(x+2)^{2}(x-2)^{3}(x-5)^{2}$

## E7.

$x(x+5)(x-3)$

D2. The graph has single roots at $\mathrm{x}=-5, \mathrm{x}=0$, and $\mathrm{x}=3$

D5. The graph has a single root at $x=0$, a double root at $x=5$, and a triple root at $x=2$.

D8. The graph only has triple roots.

D11. The graph has single roots at $\mathrm{x}=-3, \mathrm{x}=1$, and $\mathrm{x}=2$.

D3. The graph has double roots at $x=-3, x=0.5$, and $\mathrm{x}=3$

D6. The graph has single roots at $x=-6$ and $x=-2$. The graph has a double root at $x=5$.

D9. The graph has two double roots and no other types of roots.

D12. The graph has four roots.
One root is a single root while the other roots are not.

E3.
$x(x-2)^{3}(x-5)^{2}$

E6.
$(x-1)(x-2)^{2}(x-5)^{2}$

## E9.

$(x+3)(x-1)(x-2)$

## E10.

$x(x+3)^{3}(x-1)^{2}$

## E11.

$(x+6)(x+2)(x-5)^{2}$

E12.
$(x+3)^{2}(x-2)^{2}$













