**Collecting like terms with powers**

Green

Simplify by collecting like terms

|  |  |
| --- | --- |
| -ab + 4ab – 3 = | 3a2 + 2a + 2a2 + 4a = |
| -2bc + 1 + 4bc = | 3a2 + 2a + 3a2 = |
| -bc +a + 5bc – 3a = | a2 + ab + 2a2 + ab = |
| -8a – bc – 2a – 3bc = | a2 + b2 + a2 + b2 = |
| -5ac + ab + ac – bc = | c2 + b2 + a2 + b2 = |

Amber

Simplify by collecting like terms

|  |  |
| --- | --- |
| 2c2 + b2 + 3a2 + 2b2 = | 7ay2 + 2a + 2ay2 = |
| a2 + b2 - a2 + b2 = | 3ay2 + 4g - 2ay2 = |
| -y2 + b2 - y2 + b2 = | 2ay2 + 4a2 - 4ay2 + a2= |
| -y2 + b2 - y2 - b2 = | 3ay2 + 3a2 - ay2 + y2= |
| -2y2 - b2 - 3y2 + b2 = | 6xy2 + 4y2 – 9xy2 + y2= |

Red

Simplify by collecting like terms

|  |  |
| --- | --- |
| 2c2 + c3 + 3c2 + 2c3 = | ab3 + ab2 + ab4 + ab3 = |
| c2 + 2c3 + 3c2 + 2c2 = | ab4 + ab2 + ab4 – ab2 = |
| 2c2 + 3c3 - c2 + c3 = | a2b + a2b + ab3 + ab3 = |
| 2c2 + 3c3 - c2 + c3 + c = | a2b + 1 + a2b + 2 = |
| ab2 + ab2 + ab3 + ab3 = | 3a2b + 5 - 5a2b + 1 = |

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**Solutions: Collecting like terms with powers**

Green

|  |  |
| --- | --- |
| -ab + 4ab – 3 = 3ab – 3 | 3a2 + 2a + 2a2 + 4a = 5a2 + 6a |
| -2bc + 1 + 4bc = 2bc + 1 | 3a2 + 2a + 3a2 = 6a2 + 2a |
| -bc +a + 5bc – 3a = 4bc – 2a | a2 + ab + 2a2 + ab = 3a2 + 2ab |
| -8a – bc – 2a – 3bc = -10a – 3bc | a2 + b2 + a2 + b2 = 2a2 + 2b2 |
| -5ac + ab + ac – bc = -4ac + ab - bc | c2 + b2 + a2 + b2 =a2 + 2b2 + c2 |

Amber

|  |  |
| --- | --- |
| 2c2 + b2 + 3a2 + 2b2 = 3a2 + 3b2 + 2c2 | 7ay2 + 2a + 2ay2 = 9ay2 + 2a |
| a2 + b2 - a2 + b2 = 2b2 | 3ay2 + 4g - 2ay2 = ay2 + 4g |
| -y2 + b2 - y2 + b2 = 2b2 – 2y2 | 2ay2 + 4a2 - 4ay2 + a2= 5a2 – 2ay2 |
| -y2 + b2 - y2 - b2 = -2y2 | 3ay2 + 3a2 - ay2 + y2= 2ay2 + 3a2 + y2 |
| -2y2 - b2 - 3y2 + b2 = -5y2 | 6xy2 + 4y2 – 9xy2 + y2= 5y2 – 3xy2 |

Red

|  |  |
| --- | --- |
| 2c2 + c3 + 3c2 + 2c3 = 5c2 + 3c3 | ab3 + ab2 + ab4 + ab3 = ab4 + 2ab3 + ab2 |
| c2 + 2c3 + 3c2 + 2c2 =6c2 + 2c3 | ab4 + ab2 + ab4 – ab2 = 2ab4 |
| 2c2 + 3c3 - c2 + c3 = 4c3c2 | a2b + a2b + ab3 + ab3 = 2a2b + 2ab3 |
| 2c2 + 3c3 - c2 + c3 + c = 4c3+ c2 + c | a2b + 1 + a2b + 2 = 2a2b + 3 |
| ab2 + ab2 + ab3 + ab3 = 2ab3 + 2 ab2 | 3a2b + 5 - 5a2b + 1 = -2a2b + 6 |

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