**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Combining Like Terms**

**Directions:** Put the following numbers into groups based on a common characteristic. Be prepared to explain why you grouped certain numbers together.

3x, –2y, 4xy, 3, 7y, 4, –9y, x, –5, –xy

Define **like terms**.

**Directions:** Tell whether the following are examples of like terms.

1. 3x and 4x \_\_\_\_\_\_\_ 2) 3x2 and 10x \_\_\_\_\_\_\_  3) –6y and –y \_\_\_\_\_\_\_
2. 3ab and –6ab \_\_\_\_\_\_\_ 5) –16 and 9 \_\_\_\_\_\_\_   6) 7x3 and x3 \_\_\_\_\_\_\_

**Directions:** Simplify.

The directions tell you to simplify. Scan the following problems. What do you think it means to simplify in this case? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |
| --- | --- | --- |
| **1) 3x + 2x =**  | **2) –2y – –4y =**  | **3) x + –4x + –3x =** |
| **4) y + y + –10x =**  | **5) 5x2 – 7x2 + 4x2 =**  | **6) –4xy + 12xy =** |
| **7) –5 + –3x + –10x =** | **8) 4y2 – 12y2 + 7 – 2 =** | **9) 5y + –9y – 5x + –3x – 2y =** |
| **10) –7 + 3x – 4 + 2x =** | **11) 14 + –6x2 – 3x2 – 8 =** | **12) 2a + 3a – 7a – 5a =** |
| **13) x + –x =** | **14) 3y – –10y + 7y =** | **15) –7 – 4b – –3b + –6b + 5 =** |
| **16) https://lh5.googleusercontent.com/iOxU0ZylaFJL10Fvd4cyU8asdtWg_zc8r4mz8qEPd93ophiG8HNU53XBtKad6NP7SLSwFeP1VpyKYR7YERMsctc9e7ejNJwsXUtuL7Gax1W8N08Vw6aIh9I0RCW2YmaHPMHfOdq-_9XuASTZ1gx + https://lh3.googleusercontent.com/kQDTCT51ykdH0AzGPkd_ynQEn0qoRAQ0zfaQHJFxUMjTMc4oSawFYRplSd6BpW8iVQDyobJgb3DEOcLW04GEtz6TC0Q2uE9wuq2fH0OlTKHc4Qm2-bhAQDePPdisz-EUOQcyP4C2AG-tFhvMlwx =**  | **17) –https://lh3.googleusercontent.com/gW-Rh7zaxgwFfZgARmSsVkB19SNsuNNQ2aQmPAGTk9zMa5Y1aE1Y_aQDDmharEKLrafvS7RM5RhewGx9eBuOH7q0sQhZ0hZp2bKukLfBZpVDmFCnBaiW5EdQMtNaZR7PKvdUSJR6fE5Ou4NVDAx2 –https://lh4.googleusercontent.com/abn1wrNE8V6e4KJSM0IKS2PS6DRxP8v9iIeRBG7mNoPTjztGg26skxd87CNOGITa9zhP2oO0YqvJqJW98cgM9RuQSNfbzpnOvTnyde6JsxCOgY-y90NliE6ylntsH3tuyBmHBfPXkB69ORdBVQx2 =** | **18) https://lh6.googleusercontent.com/3qQOUg0HBPQ-kWsz-8K3Mjldk7Eohhl1ADr0FaHRaE-2lx0o3bA2YmTs4SqhqgqnjEGcu9retSZkPa6dHByr3wsROM8XTGaD-7tMYOOgQ2ztpsqm2-3FIzYU5IGNq1PwRq_dQdCDTKDltgASjQxy + –https://lh5.googleusercontent.com/W_n_y2F81Ry2UKLh35vjGKchiDpJfWX5sVP-4R2_ZjeLVD9IzRjth9LdTTPcgYunk4ELfU8OGuHgS34O7MrVYQbJACv0SW0zlClQsGXU9b9GX2doHH2AzDt8Ca56FTHgzykUDbYavv1oEjemKAxy =**  |

**Summary:** What are the rules for combining like terms?