**Multiplying and Factoring Polynomials**

 12

 8 What is the area? A =

 17

 13 What is the area? A =

 x - 2

 9 What is the area? A =

 x + 4

 x - 1 What is the area? A =

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| **Arithmetic** |  | **Algebra** |
| Operation: **Multiplication**2 x 3 = 6 |  | Operation: **Expansion**3 x a = 3a3 x (a + 1) = 3a + 3(3 – a)(a + 1) = -a2 + 2a + 3 |
| Reverse (Undo) Operation: **Division**6 ÷ 3 = 2 or 6 = 2 x 3 |  | Reverse (Undo) Operation: **Factoring**3a + 3 = 3(a + 1)-a2 + 2a + 3 = (3 – a)(a + 1) |

Factor each polynomial.

2x2 + 16x + 24

3x2 – 9x - 30