6.4 More Factoring

1)

a) $x^2 + x - 6$ ➔ Quadratic trinomial

b) $x^3 - x + 6$

c) $x^2 + 3 = x^2 + 0x + 3$ ➔ Quadratic trinomial

d) $4x^2 - x + 5$ ➔ Quadratic trinomial

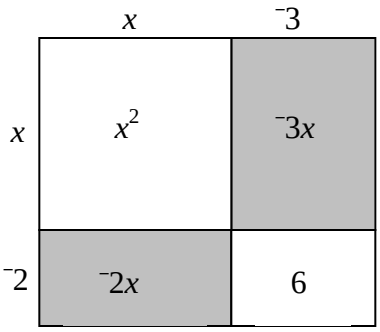
3) $(2x + 3)(x + 1)$

5)

a) $x^2 - 5x + 6 = x^2 + (-3)x + (-2)x + 6$

b) $6x^2$

c)



$x^2 - 5x + 6 = (x - 2)(x - 3)$

d) George made his mistake in the second step by assuming subtraction is associative, *which it isn't*. $x^2 - 5x + 6 = (x - 2)(x - 3)$

7) $(3x + 2)(2x - 5)$

9) Prime

11) $(2x^3 + 7)(x^3 - 4)$

13)

a) $x = 4$ or $x = 8$

b) $x = -2$ or $x = 5$

c) $x = -3$ or $x = -\frac{1}{2}$

15)

b) Both points lie on the x-axis (the line $y = 0$).

c) $x = 6$ or $x = ⁻3$

17) The price has increased by approximately 369%.

19)

a) $x = \dfrac{22}{3}$

b) $x \approx 7.333$