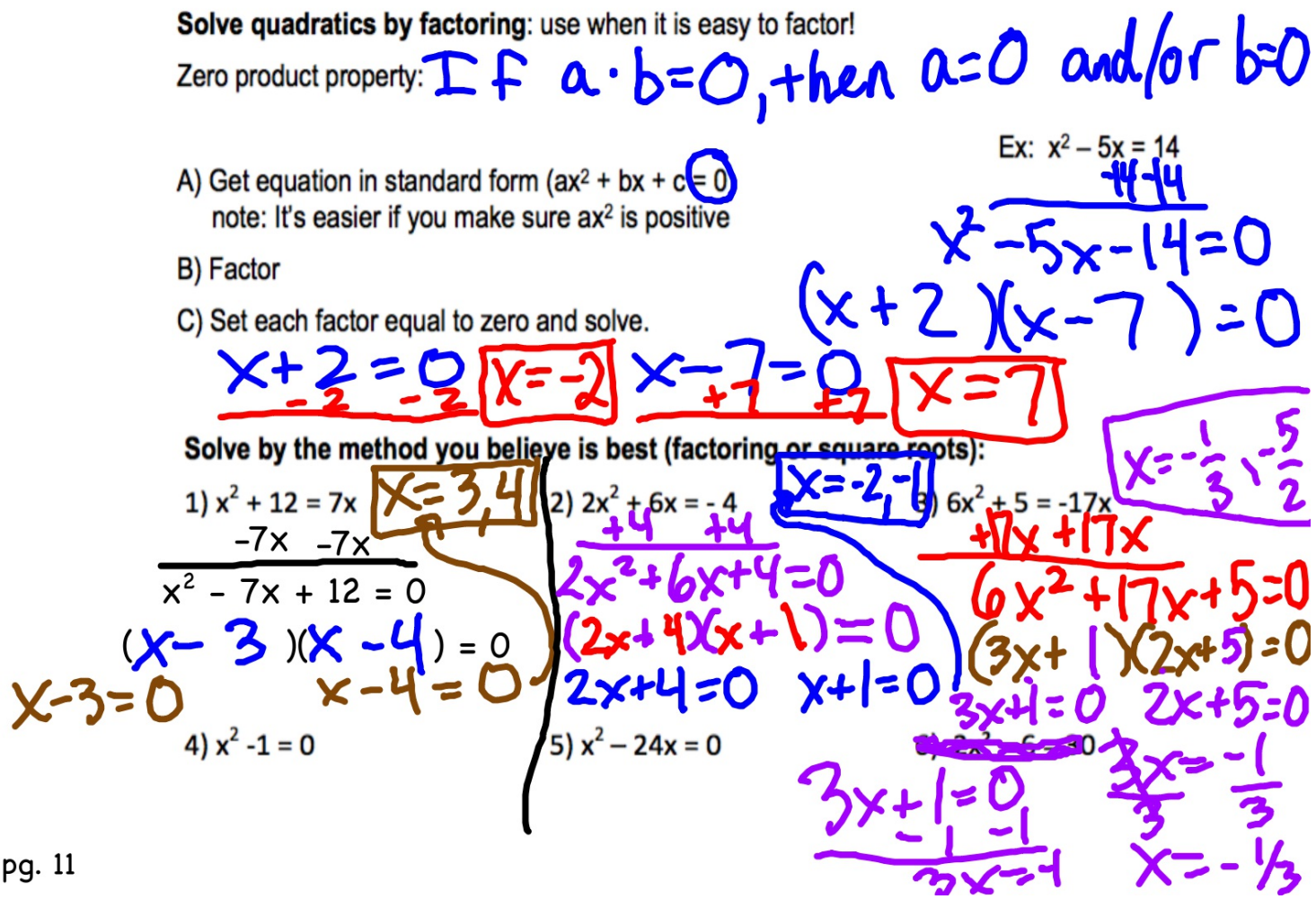
12.5 EQ:


Solve quadratics by factoring: use when it is easy to factor!
Zero product property: If a·b=0, then a=0 and/or b=0
A) Get equation in standard form (ax² + bx + c = 0)
note: It's easier if you make sure ax² is positive
B) Factor
C) Set each factor equal to zero and solve.
Ex: x² – 5x = 14
+14 +14
x² - 5x - 14 = 0
(x + 2)(x - 7) = 0
x + 2 = 0 x = -2
x - 7 = 0 x = 7
Solve by the method you believe is best (factoring or square roots):
1) x² + 12 = 7x
-7x -7x
x² - 7x + 12 = 0
(x - 3)(x - 4) = 0
x - 3 = 0 x = 3
x - 4 = 0 x = 4
2) 2x² + 6x = - 4
+4 +4
2x² + 6x + 4 = 0
(2x + 4)(x + 1) = 0
2x + 4 = 0 x = -2
x + 1 = 0 x = -1
3) 6x² + 5 = -17x
+17x +17x
6x² + 17x + 5 = 0
(3x + 1)(2x + 5) = 0
3x + 1 = 0 2x + 5 = 0
3x = -1 2x = -5
x = -1/3 x = -5/2
4) x² - 1 = 0
5) x² – 24x = 0