Ch8 part 2 test. The Zero Product property. If (a)(b)=0, then to be true, a or b must equal zero. This is this is the principle you will use to solve for x after you factor a quadratic.

For parts 1 and 2 solve with the zero product property.

1. $0=(x+3)(2x+4)$

$x+3=0$ or $2x+4=0$

$x=-3$ or $x=-2$

2. $0=(3x-5)(5x+3)$

$3x-5=0$ or $5x+3=0$

$x=\frac{5}{3}$ or $x=-\frac{3}{5}$

For the remaining problems, turn the y value into zero, factor with rectangles and diamonds, and then solve for x with the zero product property.

3. $x^2-11x+28=y$

$(x-4)(x-7)=0$

$x=4$ or $x=7$

4. $2x^2+11x-6=y$

$(x+6)(2x-1)=0$

$x+6=0$ or $2x-1=0$

$x=-6$ or $x=\frac{1}{2}$

5. $2x^2+5x-3=y$

$(x+3)(2x-1)=0$

$x+3=0$ or $2x-1=0$

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

6. $x^2-3x-10=y$

$(x-5)(x+2)=0$

$x-5=0$ or $x+2=0$

$x=5$ or $x=-2$

7. $4x^2-12x+9=y$

$(2x-3)(2x-3)=0$

$2x-3=0$ Same

$x=\frac{3}{2}$

8. $3x^2+2x-5=y$

$(3x+5)(x-1)=0$

$3x+5=0$ or $x-1=0$

$x=-\frac{5}{3}$ or $x=1$

9. $6x^2-x-2=y$

$(2x+1)(3x-2)=0$

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

10. $x^2+x-72=y$

$(x+9)(x-8)=0$

$x=-9$ or $x=8$