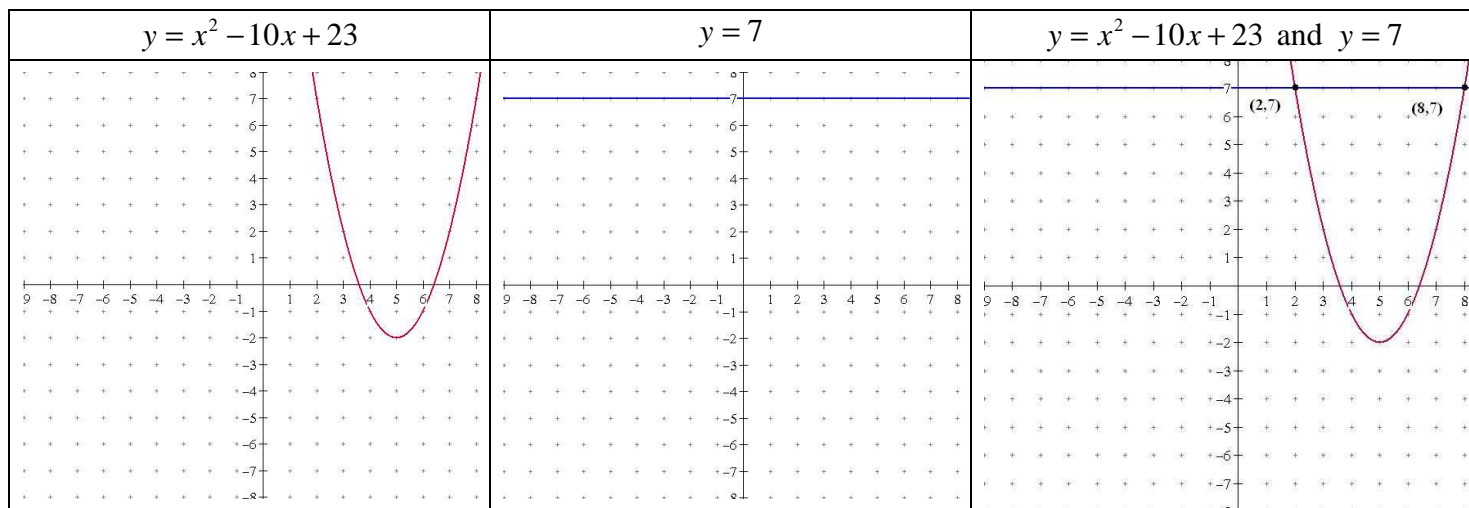


UNIT 2 WORKSHEET 11

SOLVING QUADRATIC EQUATIONS GRAPHICALLY

When faced with an equations such as $x^2 - 10x + 23 = 7$, you can solve for x by graphing both $y = x^2 - 10x + 23$ and $y = 7$ on the same plane. Just find where the two graphs intersect and you will solve for x . Note in the example at the bottom, once both functions are graphed on the same plane, you can see the value of the function $y = x^2 - 10x + 23$ is 7 when $x = 2$ and $x = 8$. That means the solutions of the equation are $x = 2$ and $x = 8$.



Solve each of the following by graphing.

1. $x^2 + 2x - 2 = 13$

2. $-x^2 - 6x - 5 = -12$

3. $-x^2 + 6x - 4 = 1$

4. $x^2 - 4x + 1 = 6$

5. $x^2 - 4x = 0$

6. $3x^2 - 18x + 8 = 8$

7. $-2x^2 + 12x - 14 = -4$

8. $\frac{1}{2}x^2 - 4x + 4 = 4$

9. $4x^2 - 24x + 30 = 10$