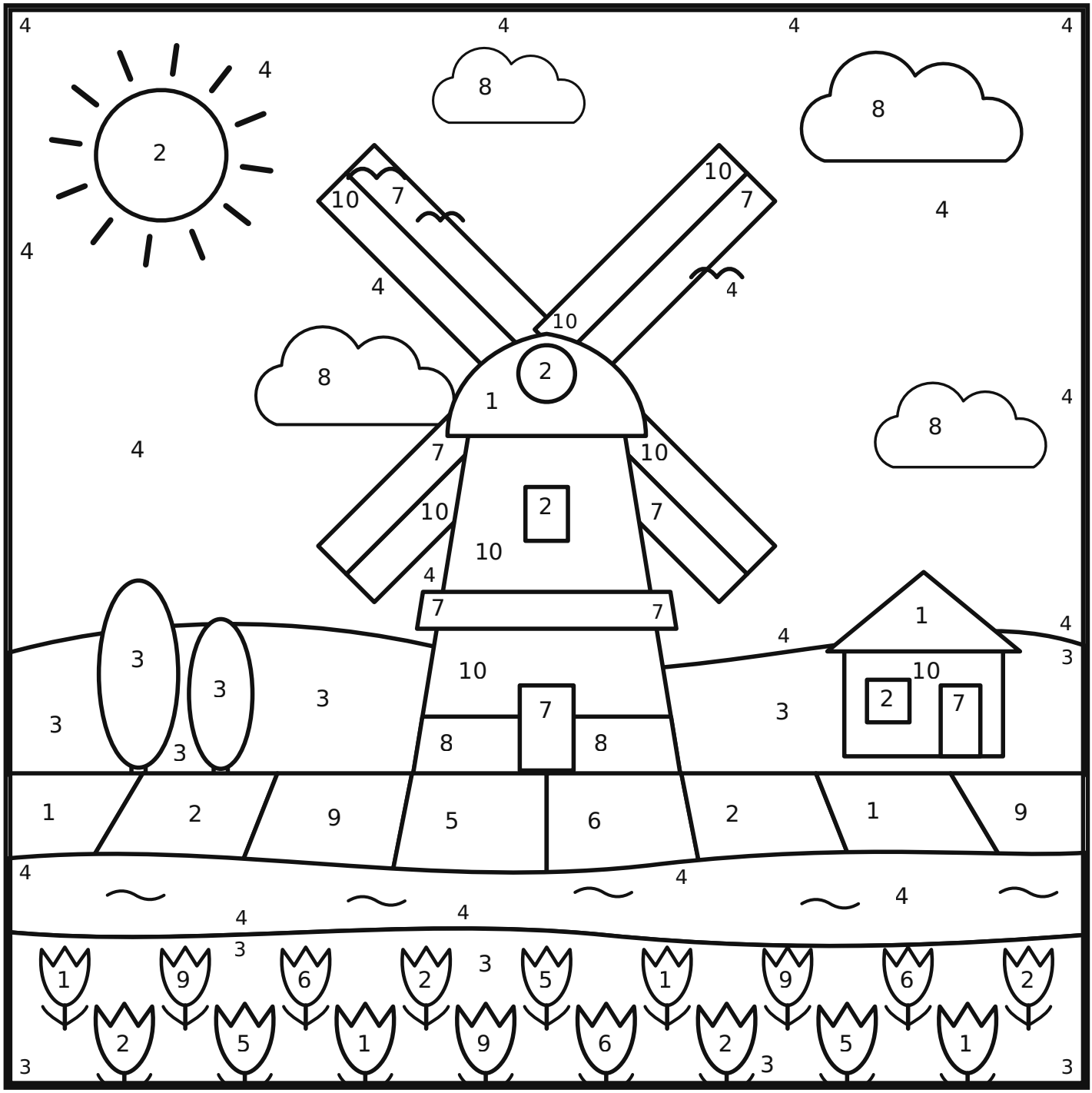
Name: _____ Date: _____

Quadratic Functions & Complex Numbers: Color By Number



Color Code:

_____ Pink 4	_____ Red 16	_____ Purple −23	_____ Tan 9	_____ Light Blue −13
_____ Orange 10	_____ Yellow −2	_____ Gray −3	_____ Brown 22	_____ Green −5

Name: _____ Date: _____

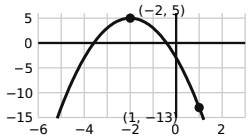
Quadratic Functions & Complex Numbers: Color By Number

Directions: Solve each problem and show your work in the box. Your answer should match one of the answers in the Color Code on the coloring sheet. Find the matching answer, write the problem number on its blank, then write the color on the line. Color every part of the picture with that number. Watch closely: the answers look alike!

1.
A ramp's profile is $y = -x^2 + 10x - 9$ (feet). Find the maximum height, in feet.

1. Color: _____

2.
A parabola has vertex $(-2, 5)$ and passes through $(1, -13)$. In $y = a(x - h)^2 + k$, find a.



2. Color: _____

3.
Solve $2x^2 + 9x - 5 = 0$ by factoring. What is the smaller solution?

3. Color: _____

4.
Write $y = 2x^2 - 12x + 5$ as $y = a(x - h)^2 + k$ by completing the square. Find k.

4. Color: _____

5.
Find the discriminant, $b^2 - 4ac$, of $3x^2 - 5x + 4 = 0$.

5. Color: _____

6.
Solving $2x^2 - 8x + 3 = 0$ with the quadratic formula gives $x = \dfrac{4 \pm \sqrt{n}}{2}$. Find n.

6. Color: _____

7.
Multiply $(3 - 2i)(4 + 5i)$ and write the result as $a + bi$. Find a.

7. Color: _____

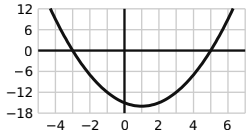
8.
Divide: $\dfrac{9 - 7i}{3 + i} = a + bi$. Find b.

8. Color: _____

9.
A ball is thrown so its height in feet after t seconds is $h = -16t^2 + 48t + 64$. How many seconds until it hits the ground?

9. Color: _____

10.
Use the graph of $y = x^2 - 2x - 15$ to find the sum of the integer solutions of $x^2 - 2x - 15 \le 0$.



10. Color: _____