# The Coordinate Plane and Number Patterns

Grade 5 · 6 questions · step-by-step answers at the end

Name: Date: Score: / 6

**USEFUL EQUATIONS**

(x, y): across, then up (0, 0) y = 2 × x distance = difference of coordinates

## Questions

Show your working in the space under each question.

**1.** EASY Which point is 4 across and 1 up?

**2.** EASY What are the coordinates of the origin?

**3.** MEDIUM How far apart are the points (2, 3) and (2, 9)?

**4.** MEDIUM A rule is "add 4". Complete the table for x = 0, 1, 2, 3.

**5.** HARD Pattern A starts at 0 and adds 2. Pattern B starts at 0 and adds 6. How are the terms related?

**6.** HARD Three corners of a square are (2, 1), (5, 1) and (5, 4). Find the fourth corner and the area.

## Step-by-step answers

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1. **(4, 1)**.
2. **(0, 0)**.
3. They are in line, so 9 − 3 = **6 units**.
4. y = **4, 5, 6, 7**.
5. A: 0, 2, 4, 6. B: 0, 6, 12, 18. Each term of B is **3 times** the matching term of A.
6. Fourth corner **(2, 4)**. Side 3, so the area is **9 square units**.