What Does This Point Mean?

Explain points on a proportional graph, including zero and one unit

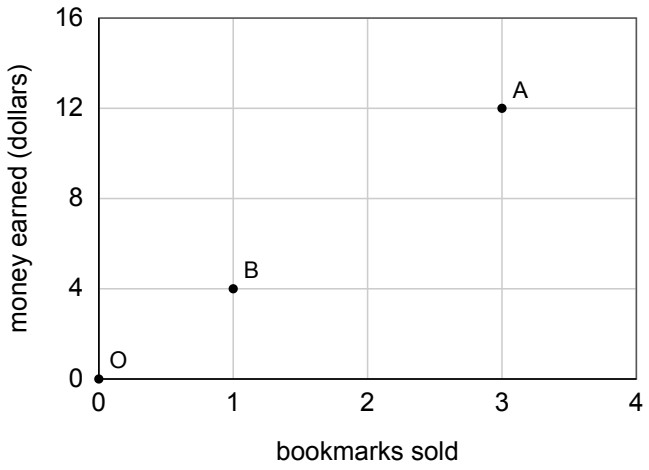
NY-7.RP.2.d · Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points (0, 0) and (1, r) where r is the unit rate.

Name _____ Date _____

Reading a Proportional Graph

Only whole bookmarks are sold. Each graph dot represents a valid whole-number count.

Classroom scenario: The art club sells handmade bookmarks for the same price each. The graph shows the total money earned, in dollars, for different numbers of bookmarks sold.



1. Point A is (3, 12). Explain what both numbers mean in this situation.

2. Explain what the point O, (0, 0), means in this situation.

3. Point B is (1, 4). Explain why this point shows the unit rate. State the unit rate with units.

Answer Key and Teaching Notes

Graph dots represent whole bookmarks; do not connect them as fractional purchases.

Materials and setup: Print and supply all student pages, keeping teacher-key pages separate. Students need a pencil. Display or provide the student graph clearly; no calculator is needed. Have students work independently first, then compare explanations with a partner.

Teaching script: Say: “On this graph, the first coordinate tells how many bookmarks were sold. The second coordinate tells the total dollars earned. Read both coordinates together, and include units in your explanation. The point where the graph begins and the point for one bookmark are especially useful.”

Observe: While students write, check whether each student connects the x-coordinate to bookmarks and the y-coordinate to dollars. Ask, “What does one bookmark cost?” if a student names a coordinate without interpreting it. Accept equivalent complete wording; do not require one exact sentence.

Answers:
1. Sample response: “When the art club sells 3 bookmarks, it earns 12 dollars total.” Both quantities and units must be present.
2. Sample response: “If the club sells 0 bookmarks, it earns 0 dollars.” This is the starting point; no sales means no money earned.
3. Sample response: “At 1 bookmark, the club earns 4 dollars. Since the amount is for one bookmark, the unit rate is 4 dollars per bookmark.”

Quick rubric: For each item, award credit when the student accurately names both quantities in context. For item 3, the explanation must connect one bookmark to 4 dollars and state dollars per bookmark.

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