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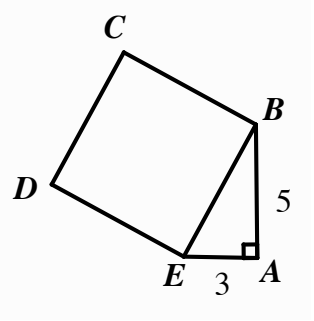
In the figure above, what is the area of square BCDE?

(a) 4
(b) 16
(c) 25
(d) 34
(e) 45

Answer ☐a ☐b ☐c ☒d ☐e

Vocab Level 650



Applications ☐SAT ☐PSAT ☐ACT ☐ISEE ☐SSAT ☐GMAT ☐GRE ☐LSAT ☐Other

CLUES

Right angle marker	**Type**

OPPORTUNITIES

Apply geometry rule	**Type** Pythagorean Theorem

RULES

Pythagorean Theorem	**Type**
Area of Square	**Type**

(May 2006, p. 27, #11 Section 6)

Top

There are two “classic” Pythagorean triplets that come up a lot on the test: 3-4-5 and 5-12-13. (Some math books refer to these at Pythagorean triples instead of Pythagorean triplets.) In each case, the largest number is the length of the hypotenuse. This can be tricky because, as with this question, when a triangle has LEGS of 3 and 5 the hypotenuse can’t possibly be 4. You should be on the lookout for these triplets because identifying them will save you time, but don’t jump to conclusions just because you see two of the numbers.

Mid

The hypotenuse of the triangle makes up one side of the square, so if you can find the length of the hypotenuse you’ll be well on your way to earning points. A straightforward application of the Pythagorean Theorem gives us a length of (root)34. (root)34(squared) gives an area of 34 for the square.

Basic

Remember: you can “eyeball” estimate the length of the sides of the square. Because the triangle shown has a height of 5, the hypotenuse must be longer than 5. That means that the sides of the square must be greater than 5, and that the area of the square must be greater than 25. That will let you eliminate answers (a), (b), and (c), which means it’s time to guess and move on!