11

If $x = 2\sqrt{3y}$ and $y = 2\sqrt{5}$, what is the value of x^4 ?

A) 960

B) 1,440

C) 2,880

D) 5,760

12

A line in the xy-plane passes through the point $(3, 1)$ and has a slope of -2. Which of the following points lies on the line?

A) $(-1, 3)$

B) $(0, -2)$

C) $(1, -3)$

D) $(1, 5)$

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If $y < 0$, which of the following is equivalent to $\dfrac{2}{\frac{1}{y-1} + \frac{1}{y-5}}$?

A) $\dfrac{4y - 12}{y^2 - 6y + 5}$

B) $\dfrac{y^2 - 6y + 5}{y - 3}$
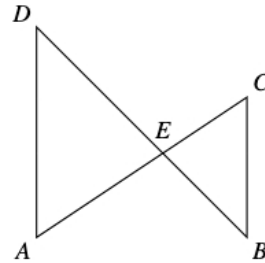
C) $4y - 12$

D) $2y^2 - 12y + 10$

14

If $2x - y = 2$, what is the value of $\dfrac{9^x}{3^y}$?

A)   3
B)   9
C) 27
D) 81

15

In the figure above, the lengths of AD, BC, and BD are 300, 200, and 425, respectively. Segments AC and BD intersect at E, and segments AD and BC are parallel. What is the length of DE ?

A) 170
B) 212.5
C) 255
D) 275