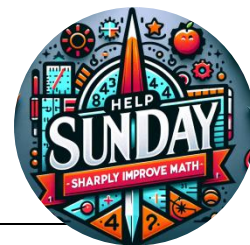


SSAT 数学硬骨头 VII



一条直线通过 $(3-x, 4)$, $(5, 6x)$ 两个点, 且斜率等于 4,

1. 求 x , 并给出这条直线的方程表示。
2. 当这条线往右移动 4, 再往下移动 5, 新的直线的方程式是什么?

Sand is poured into a box at a rate of 2 ft^3 per hour. The box has a length of 2 ft, a width of 1 ft, and a height of 5 ft. What is the time, in minutes, it will take to completely fill the box?

Question

Sophia swam 500 meters in 9 minutes and 30 seconds. Which of the following is the best estimate for Sophia's speed in miles per hour?

(Use 1 mile = 1.6 kilometers).

Options:

- A) 1.8 mph
- B) 2.1 mph
- C) 3.2 mph
- D) 4.5 mph
- E) 6.0 mph

Question

Solve for x in the equation:

$$\frac{24x^4}{8x^2} = 216$$

$$\frac{54x^6}{18x^2} = 486$$

$$\frac{40x^5}{10x^3} = 250$$

(这是三道题)

简化: $6p^2 + 18p - 60$

Question

A system of linear equations is shown below:

$$2x - 3y = 7$$

$$-4x + 6y = -14$$

Which of the following statements are **true** about the graph of the system in the xy -coordinate plane?

(Select all that apply.)

Options

- A) The system is represented by the same line.
 - B) The system has infinitely many solutions.
 - C) The lines intersect at $(0, -\frac{7}{3})$.
 - D) The lines are parallel but do not overlap.
 - E) The slope of the lines is $\frac{2}{3}$.
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计算: $\left(p - \frac{-3 + 3\sqrt{5}}{2}\right) \left(p - \frac{-3 - 3\sqrt{5}}{2}\right)$