Answer for Question 33.

This is a complicated problem that involves simultaneous equations and rational number (fraction) multiplication and simplification.

The correct answer is B.

If $x + 4y = 5$ and $5x + 6y = 7$, then $3x + 5y = ?$

First setup as:

X + 4y = 5

5x + 6y = 7

One option is to multiply the top equation by 5 and then subtract the bottom equation to eliminate x.

5x + 20y = 25

5x + 6y = 7

After subtraction:

14y = 18

Divide both sides by 14 to give $y = \frac{9}{7}$.

Then, substitute into either equation to solve for x.

$$x + 4 * \frac{9}{7} = 5$$

$$x + \frac{36}{7} = 5$$

$$7x + 36 = 35$$

$$7x = -1$$

$$x = \frac{-1}{7}$$

Then, substitute x and y into the final equation: 3x + 5y = ?

$$3 * \frac{-1}{7} + 5 * \frac{9}{7} = ?$$

$$\frac{-3}{7} + \frac{45}{7} = \frac{42}{7} = 6, so\ answer\ B.$$