1. Which steps could be used to solve for x in the equation $7x + \frac{1}{3} = 2\frac{2}{3}$?

A Divide both sides of the equation by $\frac{1}{7}$, and then subtract 3 from both sides of the equation.

B Divide both sides of the equation by 7, and then subtract $\frac{1}{3}$ from both sides of the equation.

C Subtract $\frac{1}{3}$ from both sides of the equation, and then divide both sides of the equation by 7.

D Subtract 3 from both sides of the equation, and then multiply both sides of the equation by 7.

2. Two students will use different methods to calculate the height of a rectangle that has a length of 10 units and a perimeter of 60 units.

Student 1	Student 2
$60 = 2h + 2(10)$	$(60 \div 2) - 10 = h$

If the students only use whole numbers, which statement is true about the operations the students will use to solve each method?

A Student 1 will add then divide, and Student 2 will divide then subtract.
B Student 1 will subtract then divide, and Student 2 will divide then subtract.
C Student 1 will divide then add, and Student 2 will subtract then divide.
D Student 1 will divide then subtract, and Student 2 will subtract then divide.

3. Which of the following describes how the value of x can be found in the equation $\frac{x}{3} + 4 = \frac{1}{2}$ in two steps?

A Subtract 4 from both sides of the equation, and then multiply both sides of the equation by 3.

B Subtract 4 from both sides of the equation, and then multiply both sides of the equation by $\frac{1}{3}$.

C Add 4 to both sides of the equation, and then multiply both sides of the equation by 3.

D Add 4 to both sides of the equation, and then multiply both sides of the equation by $\frac{1}{3}$.

4. Which statement BEST describes how the equation $3 - \frac{4}{5}x = 12$ can be solved for the value of x in two steps?

A   Add $\frac{1}{3}$ to both sides of the equation, then multiply both sides by $-\frac{4}{5}$.

B   Add 3 to both sides of the equation, then multiply both sides by $\frac{4}{5}$.

C   Subtract $\frac{1}{3}$ from both sides of the equation, then multiply both sides by $-\frac{5}{4}$.

D   Subtract 3 from both sides of the equation, then multiply both sides by $-\frac{5}{4}$.

5. A student will solve for the value of x in the equation $\frac{3}{5}x + \frac{1}{2} = \frac{4}{7}$ in two steps. Which of the following describes the step that is the most appropriate for the student to use first?

A   Add $\frac{4}{7}$ to both sides of the equation.

B   Subtract $\frac{1}{2}$ from both sides of the equation.

C   Multiply each side of the equation by $\frac{3}{5}$.

D   Subtract $\frac{3}{5}$ from both sides of the equation.

6. Which of the following describes how the value of x in the equation $85 = \frac{x+2}{5}$ could be found in two steps?

A   Add 2 to both sides, then multiply both sides by 5.
B   Divide both sides by 5, then subtract 2 from both sides.
C   Subtract 2 from both sides, then multiply both sides by 5.
D   Multiply both sides by 5, then subtract 2 from both sides.

7. Which would be the first step for solving the equation $\frac{6}{7}x + 2 = 18$?

A   add -2 to both sides of the equation

B   add 18 to both sides of the equation

C   divide both sides of the equation by $\frac{7}{6}$

D   multiply both sides of the equation by $-\frac{7}{6}$

8. Which of the following equations would be solved for x by adding 8 to both sides and then multiplying both sides by 2?

A $5 = \frac{1}{2}x + 8$

B $5 = \frac{1}{2}(x + 8)$

C $5 = \frac{1}{2}x - 8$

D $5 = \frac{1}{2}(x - 8)$

9. The steps Thomas used to solve an equation are shown.

Given:	$10 - 2(x - 1) = 8$
Step 1:	$8(x - 1) = 8$
Step 2:	$x - 1 = 1$
Step 3:	$x = 2$

Which statement about the steps Thomas used is true?

A   There is an error in Step 1.   **C**   There is an error in Step 3.
B   There is an error in Step 2.   **D**   Thomas's steps are all correct.

10. The table below shows the steps a student used to solve the equation. At least one step contains an error.

$$7 + 8x = 0$$

Step 1: $7 + 8x - 7 = 0 - 7$

Step 2: $8x = -7$

Step 3: $\frac{8x}{8} = -7(8)$

Step 4: $x = -56$

What is the first step that contains an error?

A   Step 1   **C**   Step 3
B   Step 2   **D**   Step 4