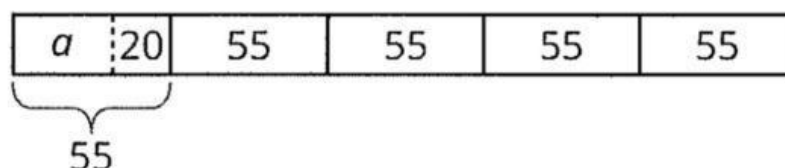


LINEAR EQUATIONS AND SYSTEMS

Andre and Elena are reading the same book over the summer. Andre says he has read $\frac{1}{5}$ of the book. Elena says she has read 20 more pages than Andre. If Elena is on page 55, how many pages are in the book?

Lin has drawn a diagram to solve this question. Find her error.



Lin solved the equation $8(x - 3) + 7 = 2x(4 - 17)$ incorrectly. Find the errors in her solution. What should her answer have been?

Lin's solution:

$$8(x - 3) + 7 = 2x(4 - 17)$$

$$8(x - 3) + 7 = 2x(13)$$

$$8x - 24 + 7 = 26x$$

$$8x - 17 = 26x$$

$$-17 = 34x$$

$$-\frac{1}{2} = x$$

Solve the equation.

$$x - 5(x - 1) = x - (2x - 3)$$

solve this equation:

$$\frac{12x + 6(4x + 3)}{3} = 2(6x + 4) - 2$$

Is this equation true for all values of x ?

Solve the equation :

$$(3-2x) + 3(1-4x) - 4(1-5x) = 2(1-3x)$$

Solve the equation :

$$3(x - 2) - 2(x - 3) - 5 = 0$$

Solve the equation :

$$9x - 16 = 3x - (x - 5)$$

Aimee, Natasha and Ruby play hockey.

- Aimee has scored 6 more goals than Natasha.
- Ruby has scored 5 more goals than Aimee.

If altogether they have scored 35 goals, how many goals did they each score?

Solve the equation :

$$5x - 10 + 2x = 6(x + 1) - x$$