Exercises 3–11

3. Marvin paid an entrance fee of $5 plus an additional $1.25 per game at a local arcade. Altogether, he spent $26.25. Write and solve an equation to determine how many games Marvin played.

Let x = # of games played

$1.25x + 5 = 26.25$

$-5 \quad -5$

$\frac{1.25x}{1.25} = \frac{21.25}{1.25}$

$x = 17$

Marvin played 17 games

4. The sum of four consecutive integers is -26. What are the integers?

5. A book has x pages. How many pages are in the book if Maria read 45 pages of a book on Monday, $\frac{1}{2}$ the book on Tuesday, and the remaining 72 pages on Wednesday?

6. A number increased by 5 and divided by 2 is equal to 75. What is the number?

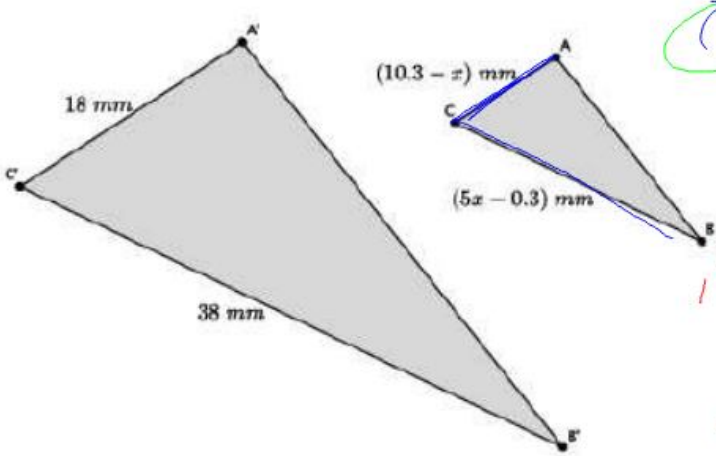
7. The sum of thirteen and twice a number is seven less than six times a number. What is the number?

8. The width of a rectangle is 7 less than twice the length. If the perimeter of the rectangle is 43.6 inches, what is the area of the rectangle?

9. Two hundred and fifty tickets are available for sale for a school dance. On Monday, 35 tickets were sold. An equal number of tickets were sold each day for the next five days. How many tickets were sold on one of those days?

10. Shonna skateboarded for some number of minutes on Monday. On Tuesday, she skateboarded for twice as many minutes as she did on Monday, and on Wednesday, she skateboarded for half the sum of minutes from Monday and Tuesday. Altogether, she skateboarded for a total of three hours. How many minutes did she skateboard each day?

11. In the diagram below, $\triangle ABC \sim \triangle A'B'C'$. Determine the length of AC and BC.



AC

$(10.3 - x)$

$(10.3 - 3.1)$

7.2 mm

BC

$5x - 0.3$

$5(3.1) - 0.3$

$15.5 - 0.3$

15.2 mm

$\frac{18}{(10.3-x)} = \frac{38}{(5x-0.3)}$

$18(5x-0.3) = 38(10.3-x)$

$90x - 5.4 = 391.4 - 38x$

$+38x \quad +38x$

$128x - 5.4 = 391.4$

$+5.4 \quad +5.4$

$\frac{128x}{128} = \frac{396.8}{128}$

$x = 3.1$