

Concept: Solving One-Step Equations

Name: _____

COMPUTER COMPONENT

Instructions: In follow the **Content Menu** path:

Equations > Solving One-Step Equations



Work through all Sub Lessons of the following Lessons **in order**:

- *Our Problem*
- *Examples With Tiles*
- *Examples Without tiles*

Additional Required Materials: *Pencil Crayons (red and blue)*



As you work through the computer exercises, you will be prompted to make notes in your notebook/math journal.

NOTES:

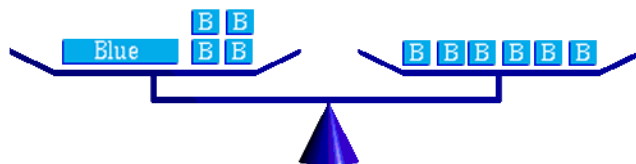
Remember:

Tile	Represents
 Blue Tile	
 Red Tile	
+	

Solve the following problems:

1. $x + 4 = 6$

$x =$ _____

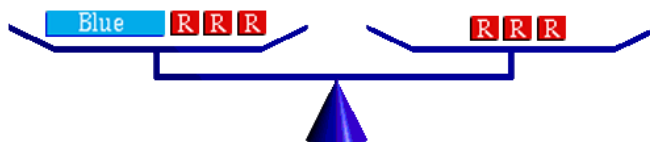


Draw the appropriate number of *red* tiles (-1) over the *blue* tiles ($+1$).

Remember to keep the balance balanced.

2. $b - 3 = -3$

$$b = \underline{\hspace{2cm}}$$

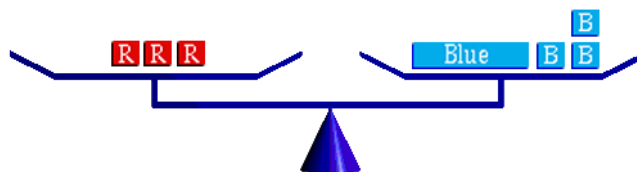


Draw the appropriate number of *blue* tiles (+1) over the *red* tiles (-1).

Remember to keep the balance balanced.

3. $-3 = m + 3$

$$\underline{\hspace{2cm}} = m$$

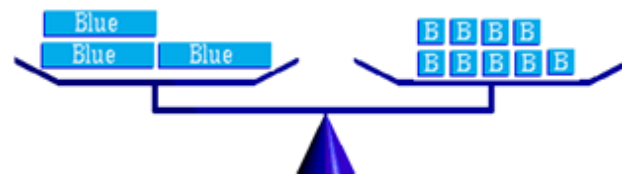


Draw the appropriate number of *red* tiles (-1) over the *blue* tiles (+1).

Remember to keep the balance balanced.

4. $3x = 9$

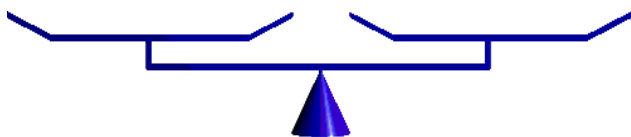
$$x = \underline{\hspace{2cm}}$$



Isolate the *x* tile.

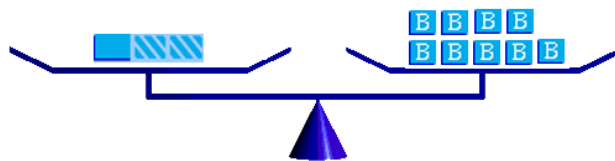
Rearrange each side into 3 equal groups

Remember to keep the balance balanced.



5. $\frac{1}{3}x = 9$

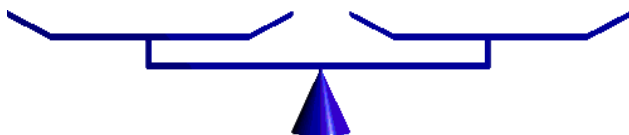
$x = \underline{\hspace{2cm}}$



Isolate the x tile.

Triple the contents of each balance.

Remember to keep the balance balanced.



Without Tiles

Fill in the blanks

Step 1: Rewrite the _____

Step 2: _____ the _____

(Hint: Think of balancing the balance)

➤ Perform the _____ operation on _____
_____ of the equation.

➤ Determine which operation; (____), (____), (____),
or (____)
should be applied to _____ sides.

Step 3: _____

Step 4: _____

Example:

Solve for x (fill in the blanks)

$$x + 6 = 7 \quad \text{Step 1}$$

$$x + 6 \underline{\quad} = 7 \underline{\quad} \quad \text{Step 2}$$

$$x = \underline{\quad} \quad \text{Step 3}$$

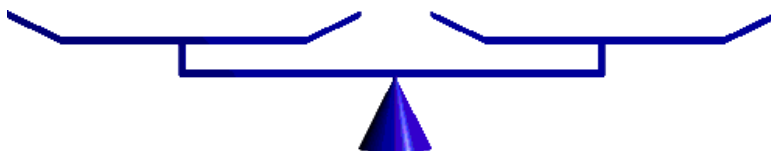
Checking

$\text{Left Side} = x + 6$ $= \underline{\quad} + 6$ $= \underline{\quad}$	Step 4
$\text{Right Side} = \underline{\quad}$	
L.S. = R.S. Therefore the solution $x = \underline{\quad}$ is correct	

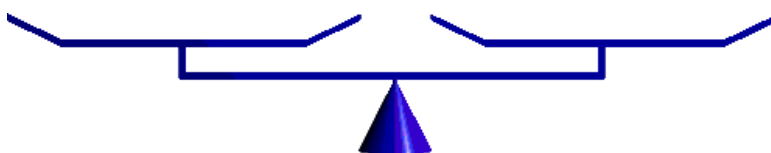
OFF COMPUTER EXERCISES

1. Given the equation $x - 4 = 6$.

(a) Represent the equation on the balance by using tiles.

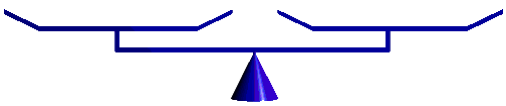


(b) Isolate the x tile by manipulating the tiles. (*Manipulate the tiles by adding an identical number of red or blue tile to each side*)



(c) Write the resulting equation and simplify it.

2. Solve each equation $7 = x - 5$ in two ways.

With the Balance	Without the Balance
	

(a) Which method did you prefer? Why?

3. Solve each equation. *Be sure to write out all of your steps and to check each answer.*

(a) $x - 5 = 7$

(b) $y + 3 = 8$

(c) $a + 7 = 3$

(d) $x + 6 = -4$

(e) $5y = -25$

(f) $7b = 35$

(g) $4n = -12$

(h) $10x = 100$

(i) $0.9x = 9$

(j) $7p - 1 = 34$