

Sometimes the chefs wanted to change the temperature of the soup without adding any cubes in. To do this they simply used their large ladle and scooped out hot or cold cubes. If they wanted to warm the soup up, they scooped out a cold cube. If they wanted to cool the soup down they scooped out a hot cube.

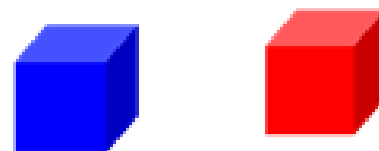
$$12 - 7 = 5$$

$$12 + (-7) = 5$$

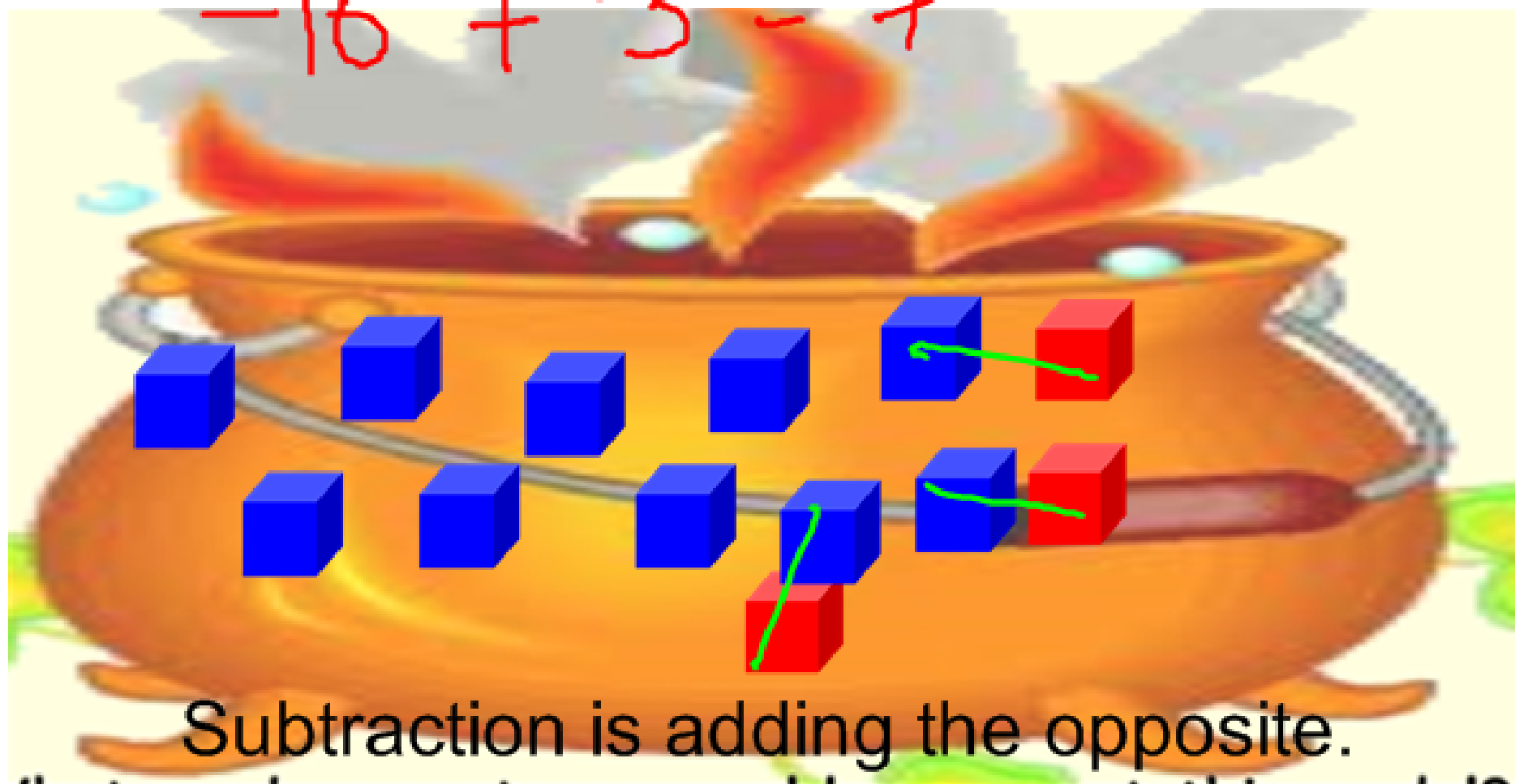
We can think of subtraction as adding the opposite.

They are the same

8. Ten cold cubes were added and three cold cubes were removed.

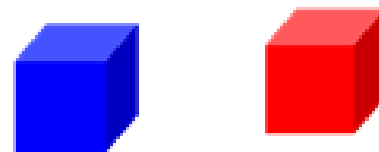


$$\begin{aligned} -10 - (-3) &= -7 \\ -10 + +3 &= -7 \end{aligned}$$

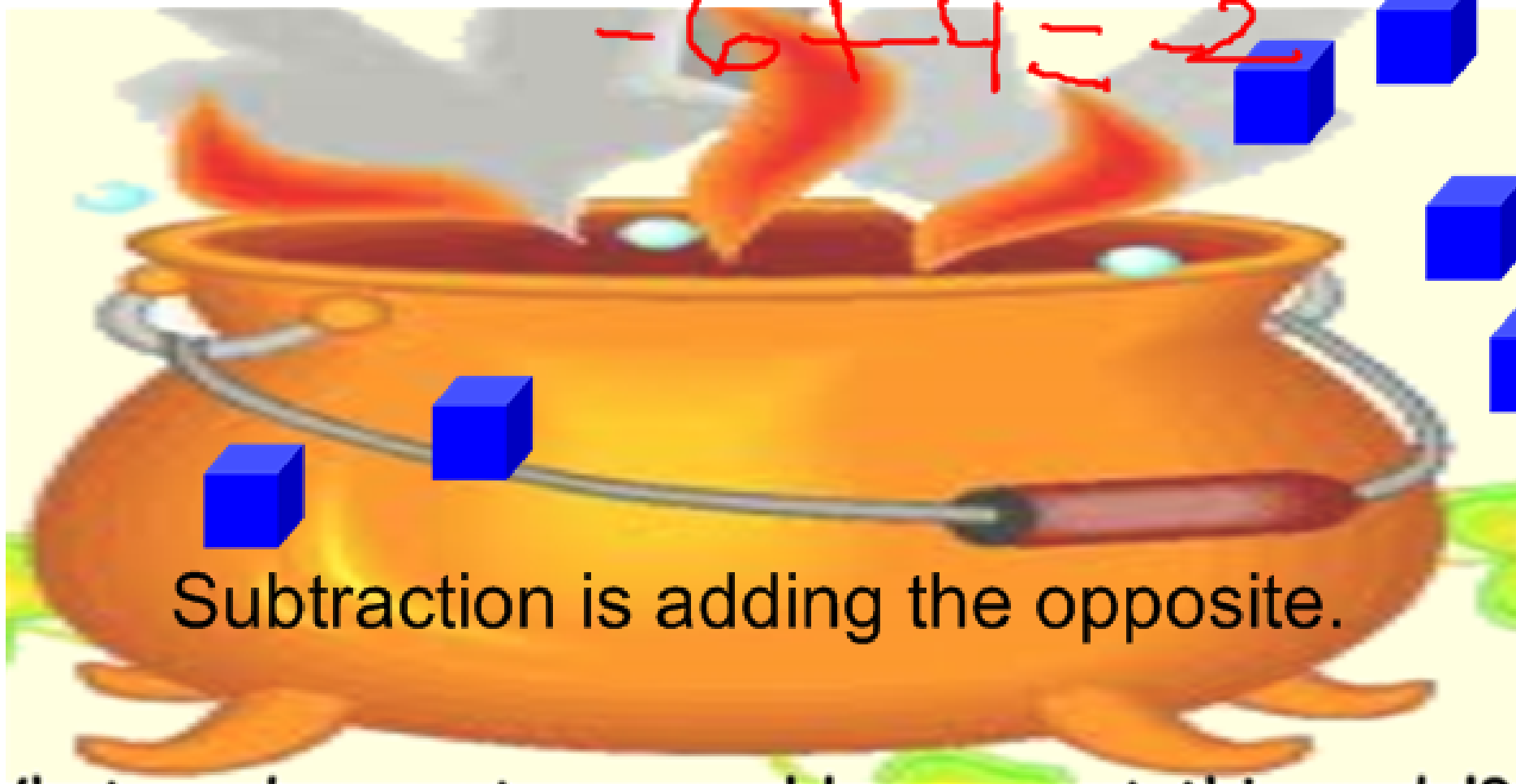


Subtraction is adding the opposite.

9. Six cold cubes were added and four cold cubes were removed.



$$\begin{aligned} & -6 - (-4) = -2 \\ & -6 + 4 = -2 \end{aligned}$$

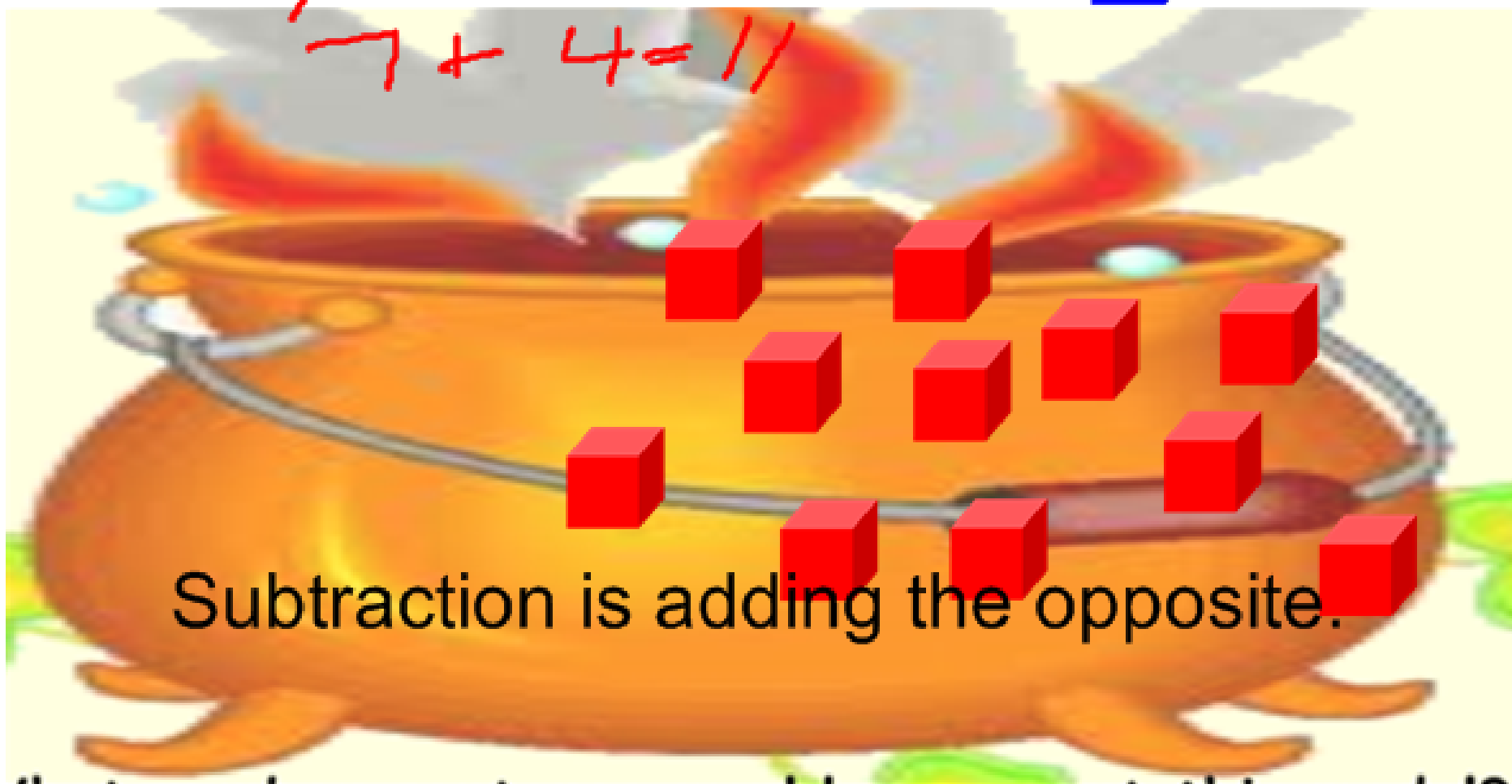
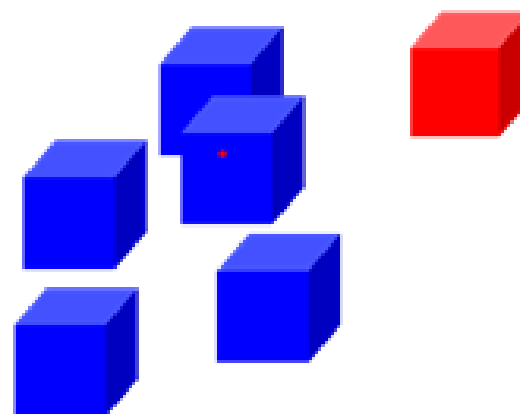


Subtraction is adding the opposite.

10. Seven hot cubes were added
and four cold cubes were
removed.

$$7 - (-4) = 11$$

$$7 + 4 = 11$$



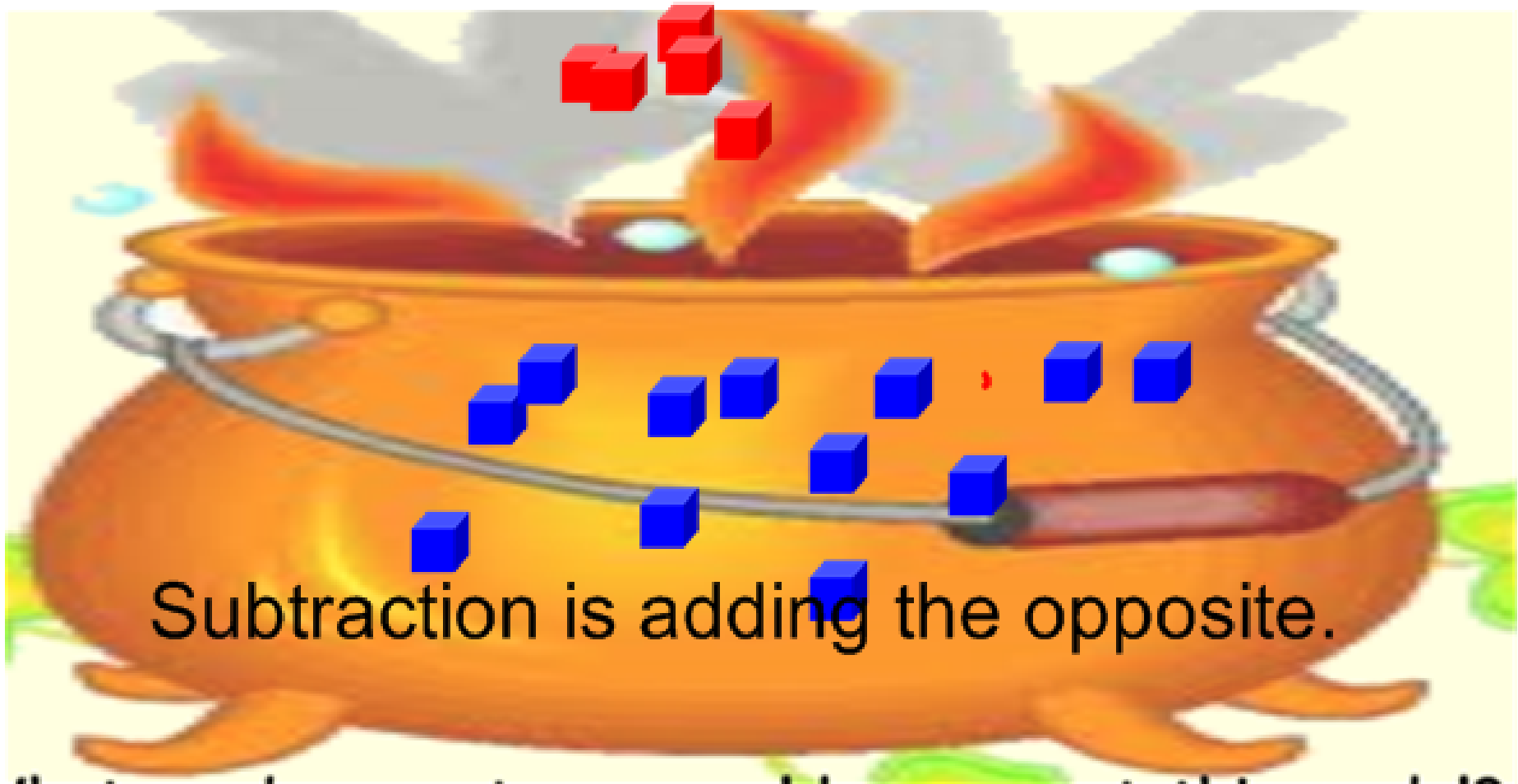
Subtraction is adding the opposite.

11. 7 cold cubes were added and
5 hot cubes were removed.



$$-7 - 5 = -12$$

$$-7 + -5 = -12$$



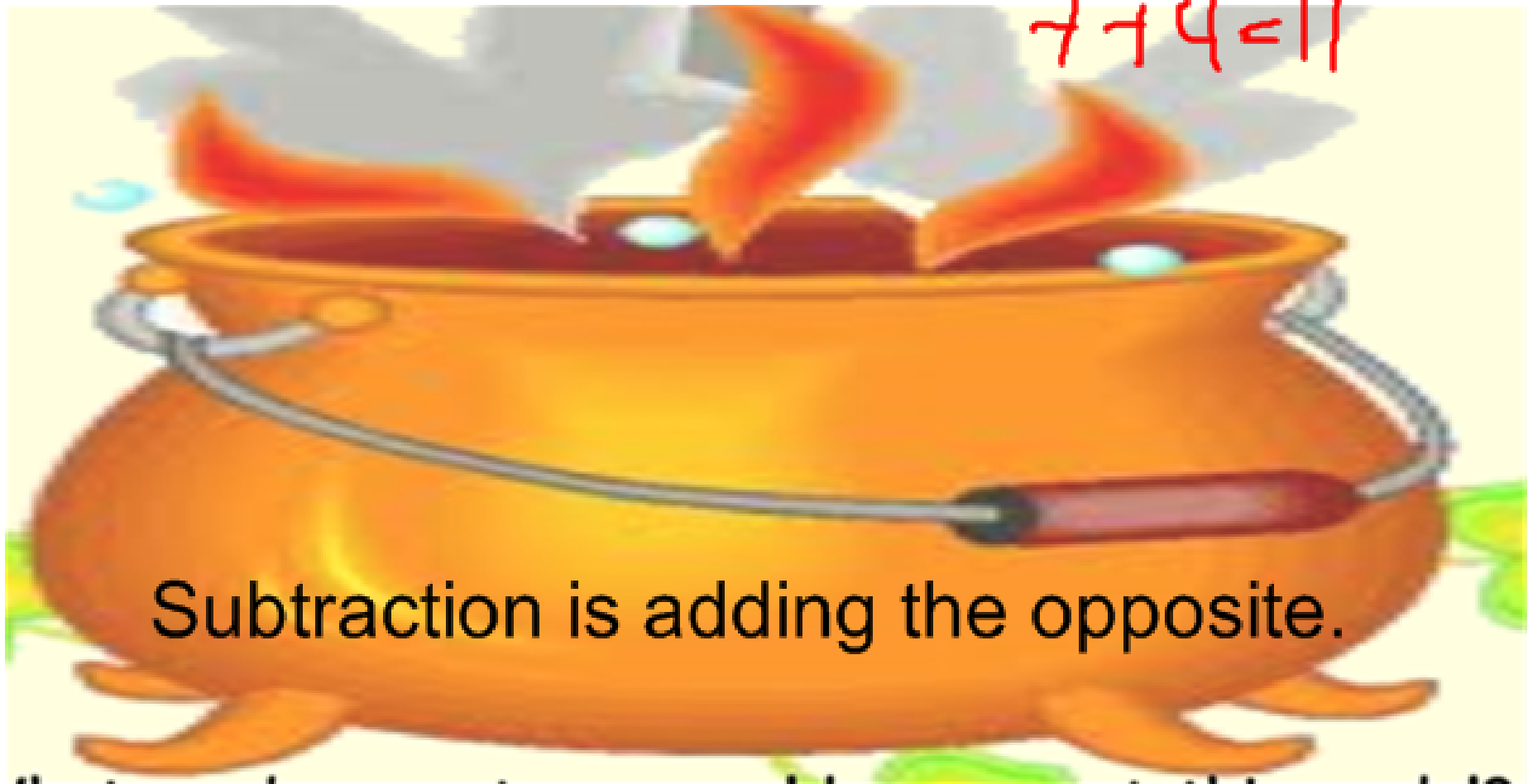
Subtraction is adding the opposite.

12. 7 hot cubes were added and
4 cold cubes were removed.



$$7 - (-4) = 11$$

$$7 + 4 = 11$$



Subtraction is adding the opposite.

13. 8 hot cubes were added and 9 cold cubes were removed.



$$8 - (-9) = 17 \quad \text{or} \quad 8 + 9 = 17$$



Subtraction is adding the opposite.

$$-6 + (-12) = -18$$

$$-6 - 12 =$$

A -6

😊 B -18

C 6

D 18



$$-6 - 12 = -18$$
$$-6 + -12 = -18$$

$14 - 24 =$

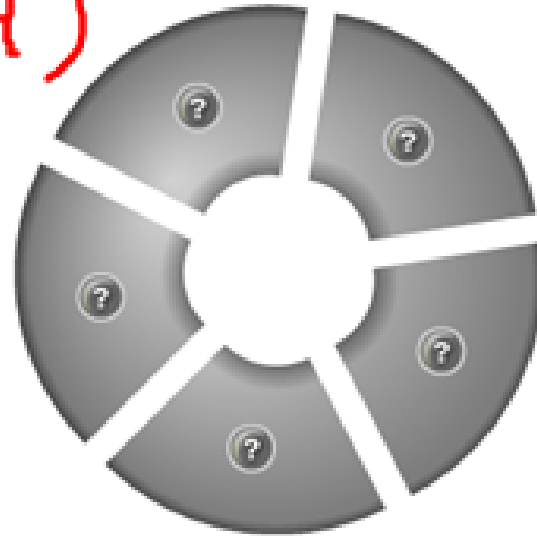
$14 + (-24)$

A 38

B 0

 C -10

D 10



$14 - 24 = -10$

$14 + (-24) = -10$

Got It? Do these problems to find out.

f. $\frac{5}{9} - \frac{2}{9}$


g. $-\frac{5}{9} - \frac{2}{9}$

h. $-\frac{11}{12} - \left(-\frac{5}{12}\right)$

f) $\frac{5}{9} - \frac{2}{9}$

g) $-\frac{5}{9} - \frac{2}{9}$

h) $-\frac{11}{12} - \left(\frac{-5}{12}\right)$



f. $\frac{5}{9} - \frac{2}{9}$

$= 3/9$



True



False

$\frac{1}{3}$



$$\text{Q. } -\frac{5}{9} - \frac{2}{9} = -1/3$$

True

False



$$-\frac{5}{9} + -\frac{2}{9} = -\frac{7}{9}$$

h. $-\frac{11}{12} - \left(-\frac{5}{12}\right)$

A $-4/3$

B $-1/2$



$$-\frac{11}{12} + \frac{5}{12}$$

$$\frac{-11}{12} = -\frac{4}{3}$$
$$\frac{-6}{12} = -\frac{1}{2}$$

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Evaluate the expression

If $h = -12$, $j = 4$, and $k = 15$

14. $-j + h - k$

$$-4 + (-12) - 15$$

$$-4 + (-12) + (-15)$$