Your goal is to get x by itself.

Get rid of everything except the x.

You need $x = 6$, or $6 = x$, or even $x = \frac{q-7}{r^5}$

Ask two questions:

1) **What do I want to get rid of?**

2) **How is it held there?**

(Now use opposite operation to get rid of it.)

If held by multiplication, then divide.

If held by division, then multiply.

Solve for x.

$\frac{5x}{5} = \frac{20}{5}$

$x = 4$

$\frac{rx}{r} = \frac{k}{r}$

$x = \frac{k}{r}$

$\frac{3}{1} \cdot \frac{x}{3} = 10 \cdot 3$

$x = 30$

$\frac{3}{1}\left(\frac{1}{3} \cdot x\right) = \frac{10}{1} \cdot \frac{3}{1}$

$x = 30$

$r \cdot \frac{x}{r} = q \cdot r$

$x = qr$

Ask two questions:

1) **What do I want to get rid of?**

2) **How is it held there?**
(Now use opposite operation to get rid of it.)

If held by addition or subtraction,
use opposite sign *of the term you want to get rid of*.

Solve for x.

$x + 7 = 10$
$-7 \quad -7$
$x = 3$

$x + r = k$
$-r \quad -r$
$x = k - r$
$x = -r + k$

$x - 9 = -20$
$+9 \quad +9$
$x = -11$

Solve for k.

$-4 + k = 7$
$+4 \quad +4$
$k = 11$

$k + 8 = -10$
$-8 \quad -8$
$k = -18$

$2 = -6 + k$
$+6 \quad +6$
$8 = k$

Ask two questions:

1) **What do I want to get rid of?**

2) **How is it held there?**
(Now use opposite operation to get rid of it.)

Solve each equation.

$2x + 5 = 19$

$-5 \quad -5$

$\frac{2x}{2} = \frac{14}{2}$

$x = 7$

$14 = 3a - 1$

$+1 \quad +1$

$\frac{15}{3} = \frac{3a}{3}$

$5 = a$

$13 - 5y = -27$

$-13 \quad -13$

$\frac{-5y}{-5} = \frac{-40}{-5}$

$y = 8$

$4m - 6 = 93 - 7m$

$+7m \quad +7m$

$11m - 6 = 93$

$+6 \quad +6$

$\frac{11m}{11} = \frac{99}{11}$

$m = 9$

$-8 + 11n = 6n - 28$

$-6n \quad -6n$

$-8 + 5n = -28$

$+8 \quad +8$

$\frac{5n}{5} = \frac{-20}{5}$

$n = -4$