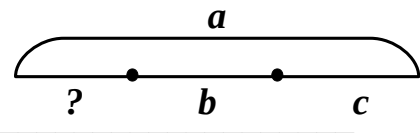


1. Subtracting a sum: $a - (b + c) = a - b - c$



$55 - (a + 5) =$ _____

$x - (3 + y) =$ _____

$21 - 2 \cdot (x + 1) =$ _____

$21 - 2 \cdot (x - 1) =$ _____

$2x - (y + x) =$ _____

$2x - (y - x) =$ _____

2. Simplify and solve the equation: $2x + 2 \times (3x - 1) = 2$

Review Circle:

A circle is a set of **all** points located on a given distance (**radius**) from its center!

3. Construct appropriate circles to answer the questions.

Plot $q = \text{Circ}(X, 5)$

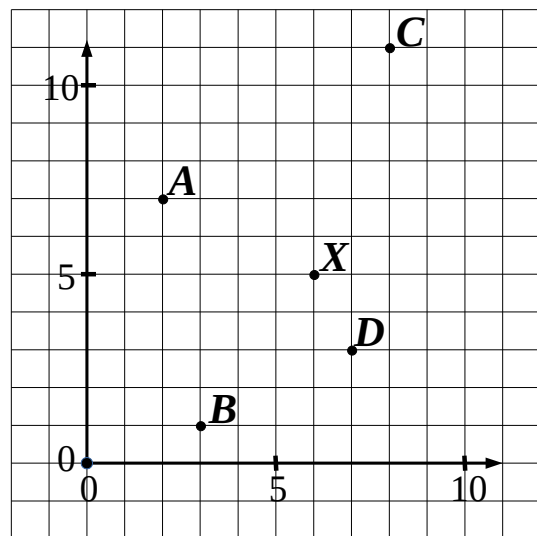
Compare:

$|AX| \square 5$

$|BX| \square 5$

$|CX| \square 5$

$|DX| \square 5$



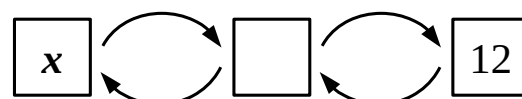
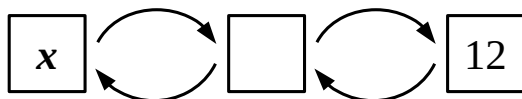
Find all points of the circle q located on the same distance from point A as point X .

Negative coefficients in equations $ax + b = c$:

4. Analyze and undo operations in the following equations:

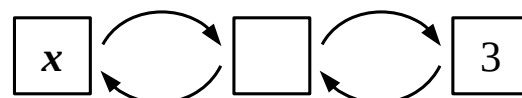
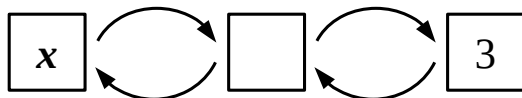
$3 + x = 12$

$3x + 6 = 12$



$12 - x = 3$

$12 - 6x = 3$



5. Solve world problems on *combined productivity*:

A. An old robot can pack 20 boxes in an hour. A newer model can pack 30 boxes in the same time.

How long will it take an old robot to pack 180 boxes? _____

How long will it take a new robot to pack 180 boxes? _____

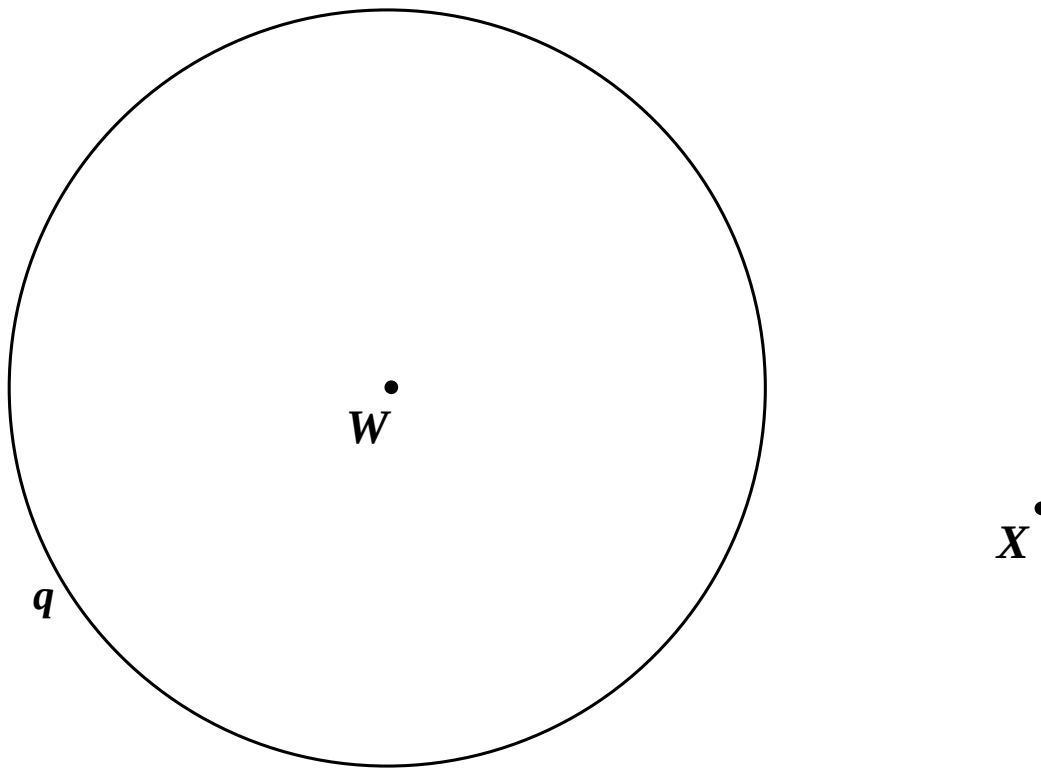
How long will it take the two robots to pack 180 boxes if they work together?

B. An old printer prints 50 pages per minute. A new printer prints 100 pages per minute.

How long will it take an old printer to print 300 pages? _____

How long will it take a new printer to print 300 pages? _____

How long will it take both printers to print 300 pages if they work together?

Intersecting Circles

Plot WX

1. Plot $a = \text{Circ}(X, 8 \text{ cm})$
2. Plot $b = \text{Circ}(X, 7 \text{ cm})$
3. Plot $c = \text{Circ}(X, 6 \text{ cm})$
4. Plot $d = \text{Circ}(X, 5 \text{ cm})$
5. Plot $e = \text{Circ}(X, 4 \text{ cm})$
6. Plot $f = \text{Circ}(X, 4\frac{1}{2} \text{ cm})$

Consider the family of **concentric** circles $a, b, \dots f$

What happens to the location of the intersection points of the circle q and the circles from the concentric family?

Is there a circle around point X that has only 1 intersection point with circle q ?