

The Secret of Biconditional Statement (Geometry 2 1 Extension)

Lesson 036 | Geometry | Biconditional statements

<https://www.youtube.com/watch?v=TLoZXv-IGGE>

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

01

Assess the biconditional: "A real number x equals 13 if and only if $x^2=169$." Write both conditionals and repair the claim.

02

Assess the biconditional: "A real number x equals 9 if and only if $x^2=81$." Write both conditionals and repair the claim.

03

Assess the biconditional: "A real number x equals 6 if and only if $x^2=36$." Write both conditionals and repair the claim.

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Name: _____ Date: _____ Show your reasoning.

04

Assess the biconditional: "A real number x equals 12 if and only if $x^2=144$." Write both conditionals and repair the claim.

05

Assess the biconditional: "A real number x equals 10 if and only if $x^2=100$." Write both conditionals and repair the claim.

06

Assess the biconditional: "A real number x equals 11 if and only if $x^2=121$." Write both conditionals and repair the claim.

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01

Assess the biconditional: "A real number x equals 13 if and only if $x^2=169$." Write both conditionals and repair the claim.

$x=13$ implies $x^2=169$, true. Conversely $x^2=169$ implies $x=13$, false because $x=-13$. Repair: $x=13$ if and only if $x^2=169$ and $x>0$.

02

Assess the biconditional: "A real number x equals 9 if and only if $x^2=81$." Write both conditionals and repair the claim.

$x=9$ implies $x^2=81$, true. Conversely $x^2=81$ implies $x=9$, false because $x=-9$. Repair: $x=9$ if and only if $x^2=81$ and $x>0$.

03

Assess the biconditional: "A real number x equals 6 if and only if $x^2=36$." Write both conditionals and repair the claim.

$x=6$ implies $x^2=36$, true. Conversely $x^2=36$ implies $x=6$, false because $x=-6$. Repair: $x=6$ if and only if $x^2=36$ and $x>0$.

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04

Assess the biconditional: "A real number x equals 12 if and only if $x^2=144$." Write both conditionals and repair the claim.

$x=12$ implies $x^2=144$, true. Conversely $x^2=144$ implies $x=12$, false because $x=-12$. Repair: $x=12$ if and only if $x^2=144$ and $x>0$.

05

Assess the biconditional: "A real number x equals 10 if and only if $x^2=100$." Write both conditionals and repair the claim.

$x=10$ implies $x^2=100$, true. Conversely $x^2=100$ implies $x=10$, false because $x=-10$. Repair: $x=10$ if and only if $x^2=100$ and $x>0$.

06

Assess the biconditional: "A real number x equals 11 if and only if $x^2=121$." Write both conditionals and repair the claim.

$x=11$ implies $x^2=121$, true. Conversely $x^2=121$ implies $x=11$, false because $x=-11$. Repair: $x=11$ if and only if $x^2=121$ and $x>0$.