

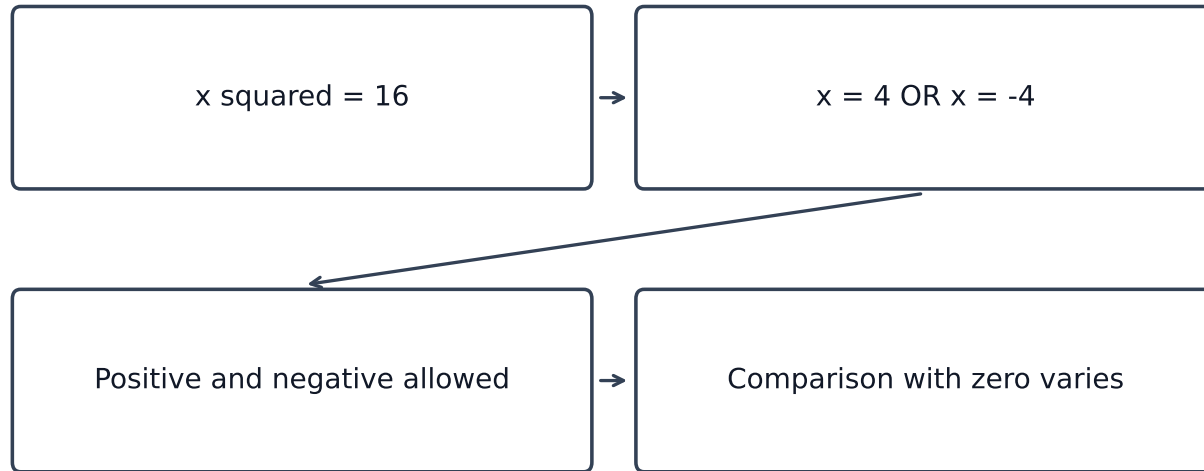
Exercise walk-through

3.1

Quantitative comparison and number reasoning

GRE · GRE · GRE General Test

Figure 10: Worked reasoning



Check the labelled values and conditions.

Exercise 2.1

2.1 Quantitative Comparison uses these relationships: A. Quantity A is greater. B. Quantity B is greater. C. Equal. D. Cannot be determined. Given real x with $x^2 = 16$, compare Quantity A: x , Quantity B: 0 . Repeat with the added condition $x > 0$.

3 Exam-style questions

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2.1 Without the added condition, **D**: $x=4$ makes A greater, while $x=-4$ makes B greater. With $x > 0$, **A**, because only $x=4$ is permitted. The principal square root of 16 is four, but the equation has both roots. One chosen example cannot prove a relationship over all allowed values.

Exercise 3.1

3.1 With the same four answer categories, let $a > 0$ and $b < 0$. Compare Quantity A: a/b , Quantity B: b/a . Give admissible examples if the relationship can vary, and identify when equality occurs.

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3.1 D. For $a=2, b=-1$, $A=-2$ and $B=-1$, so B is greater. For $a = 1, b=-2$, $A=-1/2$ and $B=-2$, so A is greater. For $a = 1, b=-1$ they are equal. More generally $a/b = b/a$ means $a^2 = b^2$, and the stated opposite signs give $a=-b$. Multiplying an inequality by the negative product ab reverses direction; ignoring this sign would reverse conclusions.

Local review checklist: follow every response instruction; support the answer with the stated evidence; explain rejected alternatives or an opposing view; check scope, restrictions and clarity. For writing, this is a formative checklist, not an official rubric score.