

Algebra I

Notes Section 5.2

Solve Inequalities Using Multiplication and Division

Big Ideas

1. How to solve the inequality by multiplying or dividing the same number from each side of the inequality.
2. How to graph the inequality when dividing by a negative number.

EXAMPLE 1 Solve and graph your solution.

a) $x/4 < 5$



b) $m/8 \geq -2$



EXAMPLE 2 Solve and graph your solution.

a) $x/-6 < 7$



b) $x/-3 > -2$



EXAMPLE 3 Solve.

a) $-3x > 24$

b) $-6n < 24$

c) $5v \geq 45$

EXAMPLE 4 A student pilot plans to spend 80 hours on flight training to earn a private license. The student has saved \$6000 for training. Which inequality can you use to find the possible hourly rates r that the student can afford to pay for training?

EXAMPLE 5 In Example 4, what are the possible hourly rates that the student can afford to pay for training?