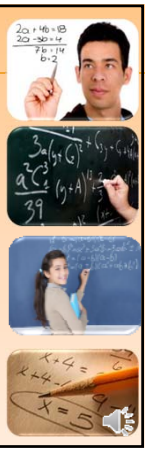
Algebra

Solving Linear Inequalities



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Graphing Inequalities

Equivalent Inequalities

Solving Inequalities Using Addition and Subtraction

Solving Inequalities Using Multiplication and Division

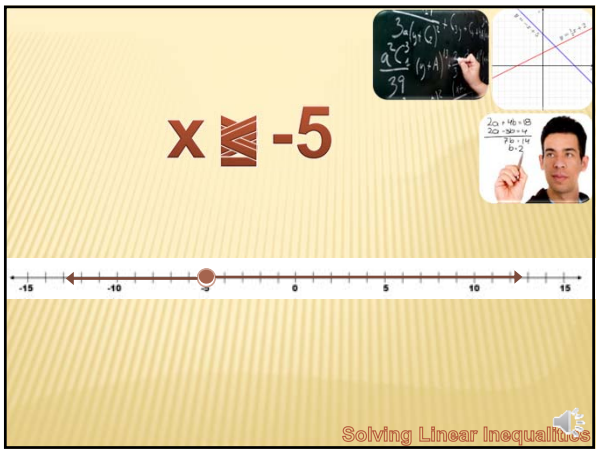
Overview

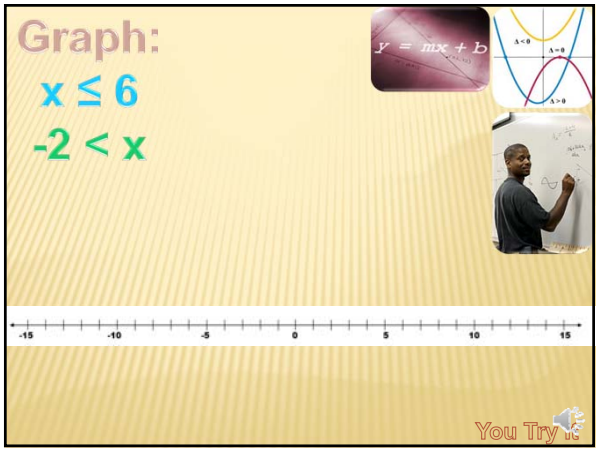
You need to be at least 16 years old to drive a car

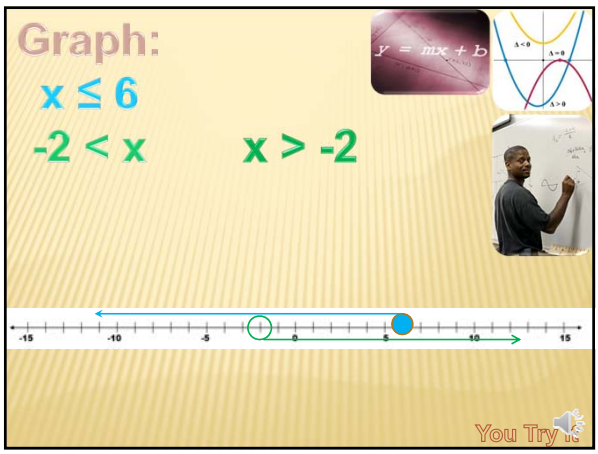
x = Age at which you can drive a car

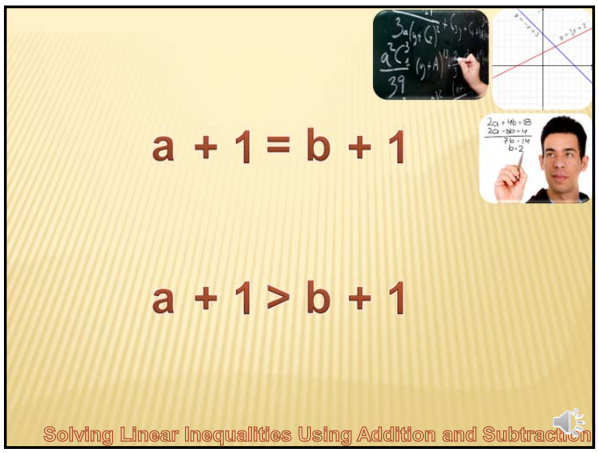
x ≥ 16

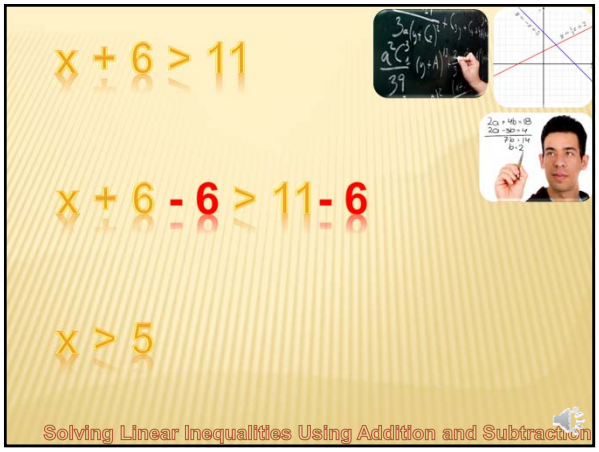
Solving Linear Inequalities

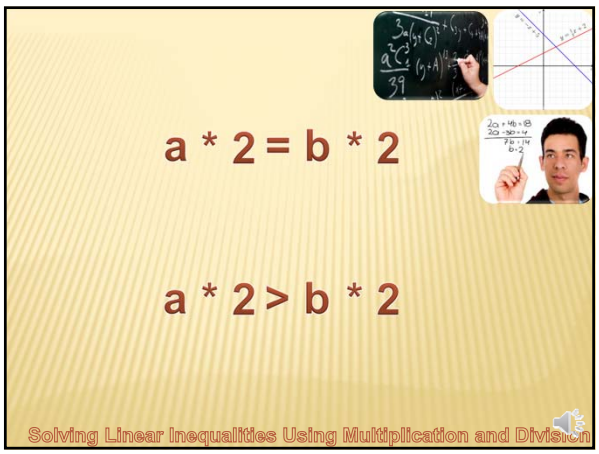

x ≤ -5
-15 -10 -5 0 5 10 15
Solving Linear Inequalities

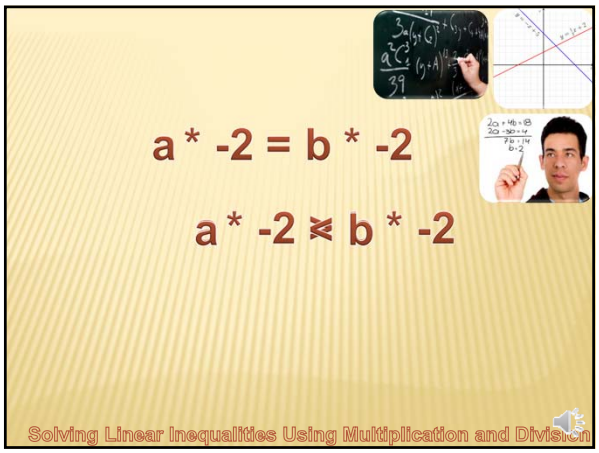

Graph:
x ≤ 6
-2 < x
y = mx + b
-15 -10 -5 0 5 10 15
You Try It

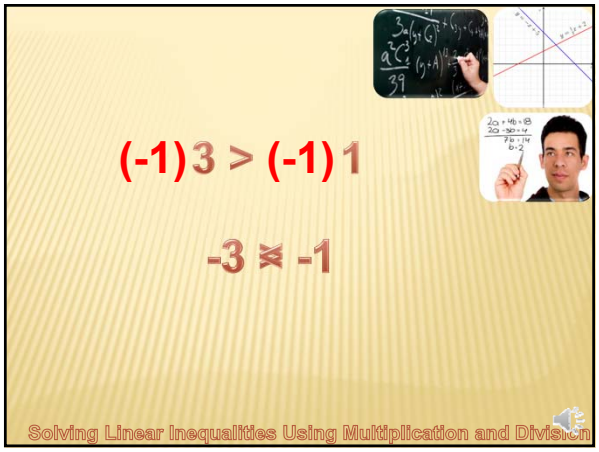

Graph:
x ≤ 6
-2 < x
x > -2
y = mx + b
-15 -10 -5 0 5 10 15
You Try It

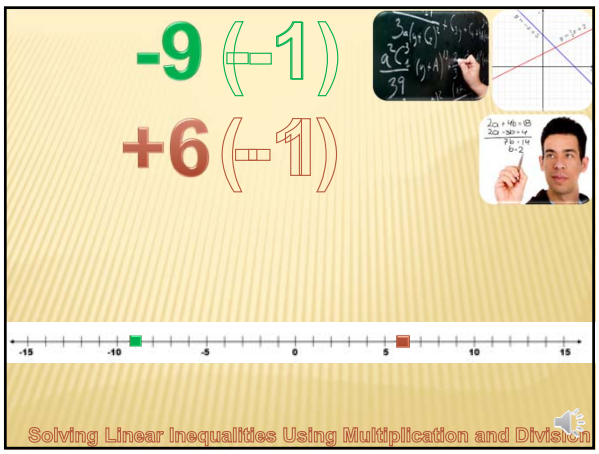

a + 1 = b + 1
a + 1 > b + 1
Solving Linear Inequalities Using Addition and Subtraction


x + 6 > 11
x + 6 - 6 > 11 - 6
x > 5
Solving Linear Inequalities Using Addition and Subtraction


a * 2 = b * 2
a * 2 > b * 2
Solving Linear Inequalities Using Multiplication and Division


a * -2 = b * -2
a * -2 ≷ b * -2
Solving Linear Inequalities Using Multiplication and Division


(-1)3 > (-1)1
-3 ≷ -1
Solving Linear Inequalities Using Multiplication and Division


-9 (÷-1)
+6 (÷-1)
-15
-10
-5
0
5
10
15
Solving Linear Inequalities Using Multiplication and Division

$-5x > 25$

$\frac{-5x}{-5} \; ? \; \frac{25}{-5}$

$x < -5$

Solving Linear Inequalities Using Multiplication and Division

Solve for x

$3x + 2 > 5$

You Try It

Solve for x

$3x + 2 > 5$

$3x + 2 - 2 > 5 - 2$

$3x > 3$

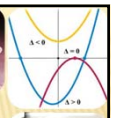
$3x \div 3 > 3 \div 3$

$x > 1$

You Try It

Solve for x

$4 - 3x \leq -5$



You Try It

Solve for x

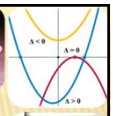
$4 - 3x \leq -5$

$4 - 4 - 3x \leq -5 - 4$

$-3x \leq -9$

$-3x \div (-3) \leq -9 \div (-3)$

$x \geq 3$



You Try It

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