

Today's Plan:

Learning Target (standard): I will prepare for the final exam.

Students will: Complete practice problems over previous concepts at the boards, put up homework problems on the board and make necessary corrections to their own work, and complete practice problems over past concepts.

Teacher will: Provide practice problems over previous concepts, check homework problems for accuracy and provide students feedback, describe and provide examples of past concepts and assign students assessment problems over new concepts.

Assessment: Board work, homework check and homework assignment

Differentiation: Students will work at the board, go over and correct homework at their seats, actively engage in practice/review problems.

Sketch the graph of each linear inequality using the slope-intercept method.

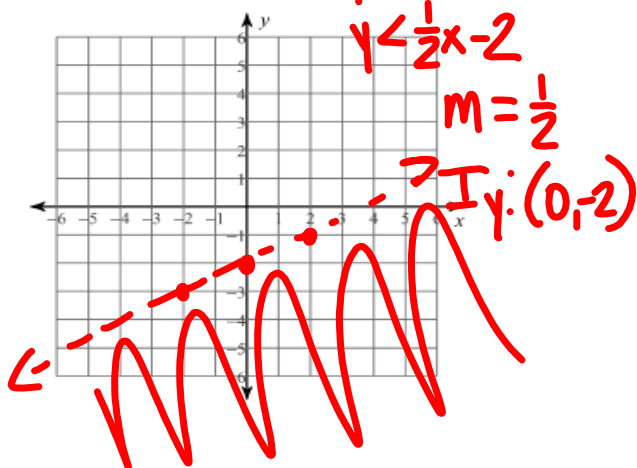
12) $x - 2y > 4$

$$-2y > -x + 4$$

$$y < \frac{1}{2}x - 2$$

$$m = \frac{1}{2}$$

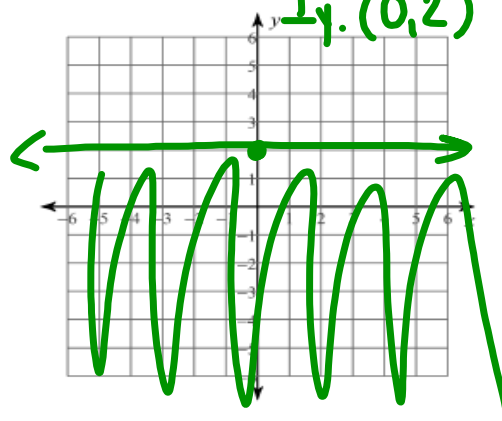
$$\rightarrow Iy: (0, -2)$$



13) $y \leq 2$

$$m = 0$$

$$Iy: (0, 2)$$



Solve each equation by factoring.

14) $3v^2 - 19v = -6$
 $3v^2 - 19v + 6 = 0$
 $3v^2 - 18v - v + 6 = 0$
 $3v(v-6) - 1(v-6) = 0$
 $(v-6)(3v-1) = 0$
 $v = 6, \frac{1}{3}$

15) $7x^2 + 24 = -46x$
 $7x^2 + 46x + 24 = 0$
 $7x^2 + 42x + 4x + 24 = 0$
 $7x(x+6) + 4(x+6) = 0$
 $(x+6)(7x+4) = 0$

Solve each equation by taking square roots.

16) $5x^2 + 4 = 319$
 $5x^2 = 315$
 $x^2 = 63$
 $x = 3\sqrt{7}, -3\sqrt{7}$

17) $3a^2 - 3 = -5$
 $3a^2 = -2$
 $a^2 = -\frac{2}{3}$
 $a = \frac{\sqrt{6}}{3}i, -\frac{\sqrt{6}}{3}i$

Solve each equation by completing the square.

18) $3b^2 - 18b + 21 = -3$
 $3b^2 - 18b = -24$
 $b^2 - 6b + 9 = -8 + 9$
 $(b-3)^2 = 1$
 $b-3 = 1, -1$
 $b = 4, 2$

19) $9v^2 - 18v + 33 = 6$
 $9v^2 - 18v = -27$
 $v^2 - 2v + 1 = -3 + 1$
 $(v-1)^2 = -2$
 $v-1 = \sqrt{2}i, -\sqrt{2}i$
 $v = 1 + \sqrt{2}i, 1 - \sqrt{2}i$

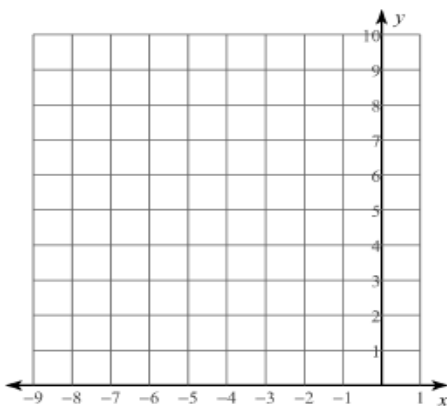
Solve each equation with the quadratic formula.

20) $2x^2 = -11x + 40$

21) $5x^2 = -8x - 4$

Sketch the graph of each function using the 6-step process.

22) $y = 2x^2 + 12x + 19$



Solve each equation with the quadratic formula.

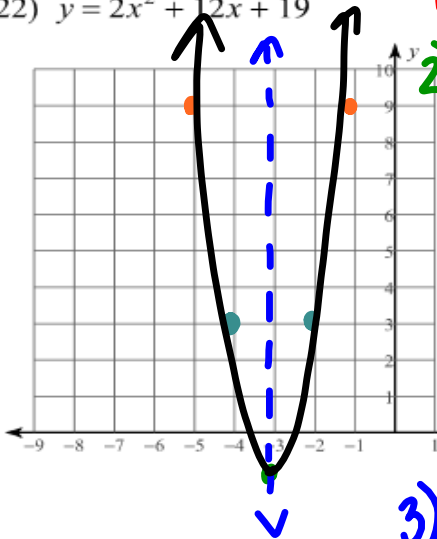
20) $2x^2 = -11x + 40$
 $2x^2 + 11x - 40 = 0$
 $a=2$
 $b=11$
 $c=-40$
 $b^2 - 4ac$
 $121 - 4(2)(-40)$
 $121 + 320$
 $441 > 0$
 2 real

$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$
 $x = \frac{-11 \pm \sqrt{441}}{2(2)}$
 $x = -8, \frac{5}{2}$

21) $5x^2 = -8x - 4$
 $5x^2 + 8x + 4 = 0$
 $b^2 - 4ac$
 $64 - 4(5)(4)$
 $64 - 80$
 $-16 < 0$ 2 complex

Sketch the graph of each function using the 6-step process.

22) $y = 2x^2 + 12x + 19$



1) opens up → minimum

2) Vertex: $(-3, 1)$

$x = -\frac{b}{2a} = -\frac{12}{4} = -3$

$y = 2(-3)^2 + 12(-3) + 19$

$y = 18 - 36 + 19$

$y = 1$

3) AOS: $x = -3$

$x = \frac{-8 \pm \sqrt{-16}}{2(5)} = \frac{-8 \pm 4i}{10}$

$x = \frac{-8}{10} \pm \frac{4}{10}i$

$x = -\frac{4}{5} + \frac{2}{5}i, -\frac{4}{5} - \frac{2}{5}i$

4)

x	y
* -5	9
* -4	3
-3	1
* -2	3
* -1	9

$f(-1) = 2(-1)^2 + 12(-1) + 19$

$= 2 - 12 + 19$

$f(-1) = 9$

$f(-2) = 2(-2)^2 + 12(-2) + 19$

$= 8 - 24 + 19$

$f(-2) = 3$