Home work for Oct 27

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ per \_\_\_\_\_\_\_

Solve the following quadratic equations using quadratic formula.

1. $4x^{2}-5x+9=0$
2. $16x^{2}-32x+64=0$
3. $4x^{2}-25=0$

Solve using factoring

1. $-6x^{2}+24x=0$
2. $-x^{2}+x+12=0$
3. $4x^{2}-25=0$

Simplify using the operations indicated

1. $\left(6-2i\right)^{2}$
2. $\left(5+4i\right)-\left(3-8i\right)$
3. $\left(1-i\right)\left(6-i\right)$
4. $\frac{3-4i}{5+2i}$

For 11 -15 answer the following

1. Find the vertex form of the equation
2. Describe the transformations
3. Graph the equation using the vertex, and x and y intercepts
4. Show work on other paper. You can graph here. Include scale
5. $y=x^{2}+6x+4$



1. $y=2x^{2}-16x+1$



1. $y=-4x^{2}+16x$



Write the quadratic equation with the given transformations.

1. Reflected over the x-axis and 3 to the left
2. Vertical stretch of 3. 2 to the right. Down 5

Answers

1. $x=\frac{5\mp i√119}{8}$
2. $x=\frac{2\mp 2i√3}{2}=1\mp i√3$

3. $x=\frac{5}{2},-\frac{5}{2}$

4. x=0 , 4

5. x = 4,-3

6. $x=\frac{5}{2},-\frac{5}{2}$

7. 32-24i

8. 2+12i

9. 5-7i

10. $\frac{7-26i}{29}$

11. vertex form

 $y=\left(x+3\right)^{2}-5$

 (-3,-5)

 Transformations

To the left 3 and down 5

X intercepts

 $x=-3\mp \sqrt{5} $

 (-0.76,0) (5.2,0)

y-intercepts

 (0,4)

12. vertex form

 $y=2\left(x-4\right)^{2}-31$

 (4,-31)

Transformations

Vertical stretch of 2. To the right 4 and down 31

X intercepts

 $x=4\mp \sqrt{15.5} $

 (7.7,0) (0.06,0)

 Y intercepts

 (0,1)

13. vertex form

 $y=-4\left(x-2\right)^{2}+16$

 (2,16)

 Transformations

Reflected over x axis

Vertical stretch of 4

To the right 2 and up 16

X intercepts

 $x=0,4$

 (0,0) (4,0)

 Y intercepts

 (0,0)

14. $y=-\left(x+3\right)^{2}$

15. $y=3\left(x-2\right)^{2}-5$