

Honors Math III
Quadratics Review from Math 2

Yost

Solve. Please do your work for #1-8 on a separate sheet of paper.

1. $m^2 = 50$ $m = \pm 5\sqrt{2}$

2. $x^2 + 6x = -13$ $x = -3 \pm 2i$

3. $(f - 12)^2 = 18$ $f = 12 \pm 3\sqrt{2}$

4. $3x^2 = -5x - 2$ $x = -\frac{2}{3}, -1$

5. $\frac{3(5-x)^2+1}{4} = 7$ $x = 8, 2$

6. $9x^2 + 35 = 36x$ $x = \frac{5}{3}, \frac{7}{3}$

7. $y^2 - 14y - 1 = 0$ $y = 7 \pm 5\sqrt{2}$

8. $4(2x - 3)^2 = -100$ $x = \frac{3 \pm 5i}{2}$

9. A rectangle is 6 cm long and 5 cm wide. When each dimension is increased by x cm, the area is tripled. Find the value of x .

$x = 4\text{cm}$

10. A swimming pool 6m wide and 10m long is to be surrounded by a walk of uniform width. The area of the walk happens to equal the area of the pool. What is the width of the walk?

width of walk is 1.57m

11. A rectangular animal pen with area 1200 m^2 has one side along a barn. The other three sides are enclosed by 100 m of fencing. Find the dimensions of the pen.

$20\text{m} \times 60\text{m}$

or

$30\text{m} \times 40\text{m}$

12. A rectangle is twice as long as it is wide. If its length is increased by 4 cm and its width is decreased by 3 cm, the new rectangle formed has an area of 100 cm^2 . Find the dimensions of the original rectangle.

$8\text{cm} \times 16\text{cm}$