

Review Pg. 366 #12bd (check answers at the back of the book)

U5L4 – 4.6 – Completing the Square

Students will learn to complete the square on a standard form quadratic relation to obtain the vertex form of that relation.

Read all of pg. 384, read through #1 on pg. 385, then do #4 – 6 pg. 385.

We will do #1 and #2 on pg. 386 together

Examples

1. Rewrite the quadratic relation in vertex form by completing the square.

a) $y = x^2 + 8x + 15$

b) $y = -2x^2 + 12x - 7$

2. A glassworks company that makes lead-crystal bowls has a daily production cost C in dollars given by the relation $C = 0.2b^2 - 10b + 650$, where b is the number of bowls made. How many bowls should be made to minimize the production cost? What is the cost when this many bowls are made?
3. A gardener wants to enclose a rectangular vegetable garden with 60 concrete curbstones, each 1m long.
- a) Write an expression for the number of curbstones used (the perimeter) and for the total area.
- b) Use the perimeter expression to rewrite the area expression in terms of only one variable.
- c) How should the gardener lay out the curbstones to maximize the total enclosed area?

Read the Key Ideas on pg. 387

Ex. Pg.390 – 394 #1 – 2)alt,4alt,8alt,9alt sketch the graphs,12,15,18