

ARALIK 2017 TARİH BASKILI
MATHEMATICS II
DERS KİTABINA İLİŞKİN DÜZELTME CETVELİ

1- Ünite 2, Sayfa 42, "Answer Key for "Test Yourself"; Soru 7'nin cevap şıkkı "a" olarak güncellenmiştir.

7. a We first need to determine the intersection points of the given curves. To do so, let us equate them:

$$\begin{aligned}2x^3 &= 8x \\ 2x^3 - 8x &= 0 \\ 2x(x^2 - 4) &= 0\end{aligned}$$

The points satisfying the last equation are -2, 0, 2. Since there is an extra condition of $x \geq 0$, the points of intersection are 0 and 2. Also, in the interval $0 \leq x \leq 2$, we have $x^3 \leq x$ and therefore the required area A is evaluated as

$$\begin{aligned}A &= \int_0^2 (8x - 2x^3) dx \\ &= \left(4 \cdot x^2 - \frac{x^4}{4} \right) \Big|_0^2 \\ &= \left(16 - \frac{16}{4} \right) - 0 \\ &= 8.\end{aligned}$$