

Solutions to Week in Review 3

1. 1176 Joules of work
2. 200 foot pounds
3. $\frac{17}{3}$ Joules
4. 2.5 Joules
5. 625 Foot Pounds
6. 2450 Joules
8. 4500 Foot Pounds
8. $\frac{38}{15}$
9. 6 kg/m
10. $\frac{4}{3}xe^{3x} - \frac{4}{9}e^{3x} + C$
11. $x^2 \sin x + 2x \cos x - 2 \sin x + C$
12. $\frac{-3}{4}e^{-2} + \frac{1}{4}$
13. $\frac{2}{3}x^{\frac{3}{2}}(\ln x - \frac{2}{3}) + C$
14. $\ln(\frac{27}{4}) - 1$
15. $x \cos^{-1} x - \sqrt{1 - x^2} + C$
16. $\frac{1}{2}(-x^2 \cos(x^2) + \sin(x^2)) + C$