

1. Simplify the following expressions by hand as far as you can (no decimals)

(a) $2^3 \cdot 2^{-3}$ (c) $\left(\frac{4}{9}\right)^{3/2}$ (e) $\sqrt[3]{24} \sqrt[3]{9}$

(b) $4^{3/2}$ (d) $81^{-1/4}$

2. The S&P 500 has had an average annual rate of return of 10.48% since 1957.

(a) If you invest \$1000 now and the fund achieves its average rate every year, what will your balance be in 3 years? In 15?

(b) What if the rate of return is 19.14%? 28.74%?