



3 A quadratic function,  $f$ , has zeros  $P$  and  $Q$ , such that  $P + Q = 5$  and  $\frac{1}{P} + \frac{1}{Q} = 8$ . Which choice describes  $f$ ?

A  $f(x) = 8x^2 - 40x + 5$

B  $f(x) = 8x^2 - 40x - 5$

C  $f(x) = 2x^2 - 10x + 5$

D  $f(x) = 2x^2 - 10x - 5$

4 Lucy invested \$6,000 into an account that earns 6% interest compounded continuously. **Approximately** how long will it take for Lucy's investment to be valued at \$25,000?

A 52.7 years

B 46.9 years

C 24.5 years

D 23.8 years

5 A lamppost is located 418 feet from a building. The angle of elevation from the base of the lamppost to the top of the building is  $32.3^\circ$ . **Approximately** how tall is the building?

A 223 feet

B 264 feet

C 510 feet

D 661 feet