

2. [8 points] The parts of this problem are **unrelated** to each other. For each part find your answers in **exact** form.

a. [3 points] Let  $Q = \frac{7}{4}e^{0.1(t-2)}$ . Find the initial value and the growth factor of  $Q$ .

*Initial value:* \_\_\_\_\_

*Growth factor:* \_\_\_\_\_

b. [5 points] Let  $p(x)$  be a power function that passes through the points (5,8) and (10,32). Find a formula for  $p(x)$ . Be sure to **show all your work**.

$p(x) =$  \_\_\_\_\_