

21 a. $\frac{5^{n+3}}{5^n} = 5^{n+3-n}$

$$= 5^3$$

$$= 125$$

b. $7^n \times 7^4 = 7^{n+4}$

c. $(3^2)^n = 3^{2 \times n} = 3^{2n}$

d. $\frac{5^n}{9^n} = \left(\frac{5}{9}\right)^n$

e. $10^{-(n+1)} \times 10^n = 10^{-n-1+n}$

$$= 10^{-1}$$

$$= \frac{1}{10}$$

$$= 0,1$$

f. $2^n \times 7^n = (2 \times 7)^n$

$$= 14^n$$