2.6 1)
$$(3^3)^2 = 3^{3 \cdot 2} = 3^6 = 729$$

2)
$$(2^{-5})^{-2} = 2^{(-5)\cdot(-2)} = 2^{10} = 1024$$

3)
$$(2^{-3})^3 = 2^{(-3)\cdot 3} = 2^{-9} = \frac{1}{2^9} = \frac{1}{512}$$

4)
$$(8^{-1})^{-1} = 8^{(-1)\cdot(-1)} = 8^1 = 8$$

5)
$$(7^{12})^0 = 7^{12 \cdot 0} = 7^0 = 1$$

6)
$$0.1^{-5} = (\frac{1}{10})^{-5} = (10^{-1})^{-5} = 10^{(-1)\cdot(-5)} = 10^5 = 100\ 000$$