

2.4

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

$$2) \quad 2^{-2} \cdot 2^3 \cdot 2^{-6} = 2^{-2+3-6} = 2^{-5} = \frac{1}{2^5} = \frac{1}{32}$$

$$3) \quad 7^{-9} \cdot 7^8 \cdot 7^{-2} = 7^{-9+8-2} = 7^{-3} = \frac{1}{7^3} = \frac{1}{343}$$

$$4) \quad 5^3 \cdot 5^{-4} \cdot 5^{-7} \cdot 5^{12} = 5^{3-4-7+12} = 5^4 = 625$$

$$5) \quad 9^3 \cdot 9^{-2} \cdot 9^0 \cdot 9^{-2} = 9^{3-2+0-2} = 9^{-1} = \frac{1}{9^1} = \frac{1}{9}$$

$$6) \quad \left(\frac{1}{2}\right)^2 \cdot \left(\frac{1}{2}\right)^{-4} = \left(\frac{1}{2}\right)^{2-4} = \left(\frac{1}{2}\right)^{-2} = (2^{-1})^{-2} = 2^{(-1) \cdot (-2)} = 2^2 = 4$$