

$$1) (a^5)^3 = a^{15} = a^{15}$$

$$2) (7^2)^3 = 7^6 = 117649$$

$$3) ((4^2)^2)^3 = (4^2)^6 = 4^{12} = 16777216$$

$$4) (-2^2)^2 = (-2^2)^2 = (2^2)^2 = 2^4 = 16$$

$$5) \left[\frac{5}{3} \right]^3 = \frac{5^3}{3^3} = \frac{125}{27}$$

$$6) \left[\frac{7}{4} \right]^2 = \frac{7^2}{4^2} = \frac{49}{16}$$

$$7) \left[\frac{3}{2} \right]^4 = \frac{3^4}{2^4} = \frac{81}{16}$$

$$8) \left[\frac{7}{2} \right]^5 = \frac{7^5}{2^5} = 8 \times \frac{16807}{32} = \frac{76807}{4}$$

$$9) \left[\frac{9}{4} \right]^2 = \frac{9^2}{4^2} = \frac{81}{16}$$

$$10) ((x^2)^3)^5 = (x^2)^{15} = x^3$$