

Directions: Simplify when possible. Otherwise, leave your answer in power form.
Do not leave negative exponents in your answer.

1) $6^{\frac{1}{4}} \cdot 6^{\frac{7}{4}}$

2) $9^{\frac{1}{5}} \cdot 9^{\frac{2}{5}}$

3) $3^{\frac{1}{2}} \cdot 3^{\frac{2}{3}}$

4) $16^{\frac{3}{8}} \cdot 16^{\frac{1}{8}}$

5) $13^{\frac{4}{5}} \cdot 13^{-\frac{2}{5}}$

6) $2^{-\frac{1}{7}} \cdot 2^{\frac{5}{7}}$

7) $7^{\frac{5}{4}} \cdot 7^{-\frac{1}{2}}$

8) $12^{\frac{1}{2}} \cdot 12^{-\frac{1}{3}}$

9) $\left(3^{\frac{1}{4}}\right)^{\frac{2}{5}}$

10) $\left(7^{\frac{1}{2}}\right)^{\frac{1}{2}}$

11) $\left(5^{\frac{1}{2}}\right)^4$

12) $\left(100^{\frac{2}{3}}\right)^{\frac{3}{4}}$

13) $(25 \cdot 4)^{\frac{1}{2}}$

14) $(8 \cdot 64)^{\frac{1}{3}}$

15) $\left(\frac{25}{36}\right)^{\frac{1}{2}}$

16) $\left(\frac{-27}{8}\right)^{\frac{1}{3}}$

17) $\left(6^{\frac{1}{7}} \cdot 6^{\frac{2}{7}}\right)^7$

18) $\left(2^{\frac{2}{3}} \cdot 2^{\frac{2}{3}}\right)^3$

19) $\left(3^{\frac{1}{5}} \cdot 3^{\frac{2}{5}}\right)^5$

20) $\left(5^{\frac{1}{2}} \cdot 5^{\frac{1}{4}}\right)^2$

21) $\left(4^{\frac{1}{2}} \cdot 4^{\frac{1}{3}}\right)^{\frac{1}{2}}$

22) $\left(8^3 \cdot 8^{-5}\right)^{\frac{2}{3}}$

23) $\left(7^{\frac{1}{6}} \cdot 7^{\frac{1}{3}}\right)^{\frac{3}{4}}$

24) $\left(9^{\frac{3}{4}} \cdot 9^{-\frac{1}{4}}\right)^{\frac{1}{3}}$

25) $\frac{5^{\frac{2}{3}}}{5^{\frac{1}{3}}}$

26) $\frac{3^{\frac{1}{2}}}{3^{\frac{1}{3}}}$

27) $\frac{6^2}{6^6}$

28) $\frac{9^{\frac{1}{4}}}{9^{-\frac{1}{2}}}$

29) $6^{-\frac{1}{2}}$

30) $8^{-\frac{2}{3}}$

31) $\frac{1}{5^{-\frac{2}{3}}}$

32) $\frac{1}{4^{-\frac{1}{2}}}$