

NAME: _____

P.I. A2.N.1: Evaluate numerical expressions with fractional exponents, without the aid of a calculator (when the answers are rational numbers)

Simplify:

1. $16^{\frac{5}{4}}$

- [A] 16 [B] $\frac{1}{2}$ [C] 32 [D] 20

2. $243^{\frac{6}{5}}$

- [A] 243 [B] $\frac{1}{3}$ [C] $\frac{1458}{5}$ [D] 729

3. $64^{\frac{2}{3}}$

- [A] $\frac{1}{4}$ [B] 16 [C] 64 [D] $\frac{128}{3}$

4. $32^{\frac{4}{5}}$

- [A] $\frac{128}{5}$ [B] 32 [C] $\frac{1}{2}$ [D] 16

5. $27^{\frac{2}{3}}$ [A] 9 [B] $\frac{1}{3}$ [C] 27 [D] 18

6. $8^{\frac{4}{3}}$

- [A] $\frac{32}{3}$ [B] $\frac{1}{2}$ [C] 16 [D] 8

7. $8^{\frac{2}{3}}$

- [A] 4 [B] 8 [C] $\frac{16}{3}$ [D] $\frac{1}{2}$

8. $81^{\frac{3}{4}}$

- [A] $\frac{1}{3}$ [B] 27 [C] $\frac{243}{4}$ [D] 81

9. $27^{\frac{5}{3}}$

- [A] 243 [B] $\frac{1}{9}$ [C] 45 [D] 729

10. Which has the same value as $144^{\frac{3}{2}}$?

- [A] 27.47 [B] 1728
[C] 2,985,984 [D] 12

- [1] C
- [2] D
- [3] B
- [4] D
- [5] A
- [6] C
- [7] A
- [8] B
- [9] A
- [10] B