HA2T
7.1 Day 3 WS

Name Key.

Simplify. Write all final answers with positive exponents.

1. $32^{-6/5}$

$(2^5)^{-6/5} = 2^{-6} = \boxed{\frac{1}{64}}$

2. $128^{2/7}$

$(2^7)^{2/7} = 2^2 = \boxed{4}$

3. $81^{-3/2}$

$(9^2)^{-3/2} = 9^{-3} = \boxed{\frac{1}{729}}$

4. $343^{2/3}$

$(7^3)^{2/3} = 7^2 = \boxed{49}$

5. $-100^{-3/2}$

$-(10^2)^{-3/2} = -10^{-3}$

$= \boxed{\frac{-1}{1000}}$

6. $\left(\frac{9}{49}\right)^{-3/2}$

$\left(\frac{3^2}{7^2}\right)^{-3/2} = \frac{3^{-3}}{7^{-3}} = \boxed{\frac{343}{27}}$

7. $\left(-\frac{729}{64}\right)^{-2/3}$

$\left(-\frac{9^3}{4^3}\right)^{-2/3} = \left(\frac{-4^3}{9^3}\right)^{2/3} = \left(\frac{4^2}{9^2}\right)$

$= \boxed{\frac{16}{81}}$

8. $1728^{1/3}$

$(12^3)^{1/3} = \boxed{12}$