Find the error in each statement if there is one. EXPLAIN the error in words. Then write the mathematical statement correctly without errors.

	Original statement	Explain error in words	Rewrite statement correctly
1	$(243)^{-1/5} = \frac{1}{\sqrt[5]{243}} = \frac{1}{\pm 3}$		
2	$\sqrt{x^5} = x^5$		
3	$(-125)^{1/3}$ does not exist		
4	$x^{-\frac{4}{6}} y^{\frac{3}{6}} z^{\frac{7}{6}} = \frac{\sqrt[6]{x^4 y^3}}{z^7}$		
5	$4^{3/7} \cdot 4^{2/7} = 16^{5/7}$		
6	$9^{\frac{3}{5}} = 5\sqrt{9^3}$		
7	$(-32)^{-1/5} = \frac{1}{(32)^{1/5}} = \frac{1}{\sqrt[5]{32}} = \frac{1}{2}$		
8	$8^{-2/3} = \sqrt[-3]{8^2}$		
9	$(-8)^{2/3} = \frac{1}{\sqrt[3]{8^2}}$		
10	$(121)^{-\frac{1}{2}} = \frac{1}{\sqrt{121}} = 11$		
11	$(121)^{1/2} = 11$		
12	$(25)^{\frac{3}{2}} = \sqrt{25}^3 = 5^3 = 125$		
13	$(-8)^{2/3} = \sqrt[3]{-8}^2 = (-2i)^2$		
14	$(-81)^{1/4} = \sqrt[4]{-81} = -3$		
15	$(-81)^{1/4} = \sqrt[4]{-81} = 3i$		
16	$(-81)^{1/4} = \frac{1}{\sqrt[4]{81}} = \frac{1}{\pm 3}$		
17	$\frac{8^{9/5}}{8^{4/5}} = 1^{5/5} = 1$		

18	$3^2 \cdot 3^4 = 9^6$		
19	$7^{\frac{1}{4}} \cdot 3^{\frac{1}{2}} = 7^{\frac{1}{4}} \cdot 3^{\frac{2}{4}} = 21^{\frac{3}{4}}$		
20	$\sqrt[4]{4} = \sqrt{2}$		

Answer the following for each polynomial:

21) For $f(x) = 2x(x-4)^2(x-1)^3(x+8)^4$, the degree is _____. This polynomial has _____ total zeros.

22) For $y = x^6 + 3x^5 + 2x^3 - 6x + 4x + 1$, the degree is _____. This polynomial has _____ total zeros.

Find the error in the following statements and EXPLAIN in words what the error is:

23) "For $f(x) = \frac{1}{2}x^5 - 6x^4 - x^3 + 5x^2 - 7x + 1$, the highest degree is 5, so the polynomial has 5 total zeros."

Explanation of error:

24) "For $y = 4x^6 + 6x^4 - 7x^3 - 21x^2 + 3$, the degree is 15, because to get the degree, you need to add up all of the multiplicities, which in this case would be 15."

Explanation of error: