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Directions: Find the derivatives of the given functions. Perform any "obvious" simplifications.

1. $f(x)=3+2 x+4 x^{3}$
2. $g(x)=\sqrt[4]{x}$
3. $y=\frac{1-\pi}{x}$
4. $g(x)=\frac{1}{\sqrt{2}}+\frac{1}{\sqrt{x}}$
$\qquad$
Directions: Find the derivatives of the given functions. Perform any "obvious" simplifications.
5. $f(x)=3+2 x+4 x^{3}$
6. $y=8 \sqrt[3]{x}$
7. $g(x)=\frac{x^{5}}{5+\sqrt{2}}$
8. $g(x)=\frac{1}{\pi^{2}}+\frac{1}{x^{2}}$
