

119/2:

$$f'(x)=5x^4 \quad f'(x)=6x^5 \quad f'(x)=9x^8 \quad f'(x)=12x^{11}$$

$$f'(x)=27x^{26} \quad f'(x)=104x^{103} \quad f'(x)=257x^{256} \quad f'(x)=1309x^{1308}$$

119/3:

$$f'(x)=kx^{(k-1)} \quad f'(x)=3nx^{(3n-1)} \quad f'(x)=(2k+1)x^{(2k)} \quad f'(x)=(3-m)x^{(3-m-1)}=(3-m)x^{(2-m)}$$

$$f'(x)=(3n-2)x^{(3n-3)} \quad f'(x)=(-n+5)x^{(-n+4)} \quad f'(x)=(1-3n)x^{(-3n)} \quad f'(x)=(-3+2k)x^{(-4+2k)}$$

$$f'(x)=(m+n)x^{(m+n-1)} \quad f'(x)=(2-2n)x^{(1-2n)} \quad f'(x)=-(k+1)x^{(-k-2)} \quad f'(x)=3(n-4)x^{(3n-13)}$$

119/4:

$$f'(x)=3x^2 \rightarrow f'(x_0)=\frac{3}{4} \quad f'(x)=4x^3 \rightarrow f'(x_0)=4 \cdot (\sqrt{2})^3=8 \cdot \sqrt{2} \quad f'(x)=5x^4 \rightarrow f'(x_0)=45$$

121/3:

$$(a) f'(x)=3x^2+4x^3 \quad (b) f'(x)=4x^3+5x^4 \quad (c) f'(x)=3y^2+9x^8 \quad (d) f'(x)=12x^{11}+3x^2$$

$$(e) f'(x)=1-\frac{1}{x^2} \quad (f) f'(x)=4x^3-\frac{1}{x^2} \quad (g) f'(x)=3x^2+\frac{1}{2 \cdot \sqrt{(2)}} \quad (h) f'(x)=\frac{-1}{x^2}+\frac{1}{2 \cdot \sqrt{(2)}}$$

121/4:

$$(a) f'(x)=6x^2 \quad (b) f'(x)=20x^3 \quad (c) f'(x)=-7x^6 \quad (d) f'(x)=6x^7$$

$$(e) f'(x)=-12x^2 \quad (f) f'(x)=-6x^9 \quad (g) f'(x)=3 \cdot \sqrt{5} x^5 \quad (h) f'(x)=\frac{12}{\sqrt{2}} x^{11}$$

$$(i) f'(x)=\frac{-6}{x^2} \quad (j) f'(x)=\frac{5}{x^2} \quad (k) f'(x)=\frac{-5}{3x^2} \quad (l) f'(x)=\frac{7}{4x^2}$$

$$(m) f'(x)=\frac{2}{\sqrt{x}} \quad (n) f'(x)=\frac{1}{3 \cdot \sqrt{x}} \quad (o) f'(x)=\frac{-3}{16 \cdot \sqrt{x}} \quad (p) f'(x)=\frac{-1}{2 \cdot \sqrt{2} \cdot \sqrt{x}}$$

121/5:

$$(a) f'(x)=20x^4+18x^2 \quad (b) f'(x)=15x^5-6x^2 \quad (c) f'(x)=10x^3-6x^4$$

$$(d) f'(x)=6x^2-\frac{4}{x^2} \quad (e) f'(x)=\frac{9}{7}x^2+\frac{2}{x^2} \quad (f) f'(x)=-2x^2-\frac{5}{3x^2}$$

$$(g) f'(x)=9,6x^3-18 \cdot \sqrt{3} x^2 \quad (h) f'(x)=\sqrt{2}+\frac{1}{2} \frac{\sqrt{2}}{\sqrt{x}}=\sqrt{2}+\frac{1}{\sqrt{2x}} \quad (i) f'(x)=\frac{-2}{x^2}+\frac{3}{2} \cdot \frac{1}{\sqrt{x}}$$

121/6:

$$(a) f'(x)=-6x^7+10x^3-2 \quad (b) f'(x)=6x^2+8x-3$$

$$(c) f'(x)=20x^3-0,6x^2+0,8x \quad (d) f'(x)=\frac{2}{3}x^2-\frac{5}{4}x+0,4$$

$$(e) f'(x)=1,5x^4+x^6-\frac{2}{x^2}+\frac{3}{14} \cdot \frac{1}{\sqrt{x}} \quad (f) f'(x)=-18x^5+3x^7+\frac{5}{3}-\frac{1}{4} \cdot \frac{1}{\sqrt{x}}$$