(a) $f'(x) = 3\tan^2(7x^2+5)\,(\tan(7x^2+5))'$

$= 3\tan^2(7x^2+5)\sec^2(7x^2+5)\,(7x^2+5)'$

$= \boxed{3\tan^2(7x^2+5)\sec^2(7x^2+5)\,(14x)}$

(b) $g'(x) = \cos(\cos(e^x))\,(\cos(e^x))'$

$= \cos(\cos(e^x))\,(-\sin(e^x))\,(e^x)'$

$= \boxed{\cos(\cos(e^x))\,(-\sin(e^x))\,(e^x)}$

(c)

$$h'(x) = \frac{\ln(x^2+1)\,(5x^2+7x)^3)' - (5x^2+7x)^3(\ln(x^2+1))'}{(\ln(x^2+1))^2}$$

$$= \frac{\ln(x^2+1)\,3(5x^2+7x)^2(5x^2+7x)' - (5x^2+7x)^3\frac{1}{x^2+1}\,(x^2+1)'}{(\ln(x^2+1))^2}$$

$$= \boxed{\frac{\ln(x^2+1)\,3(5x^2+7x)^2(10x+7) - (5x^2+7x)^3\frac{1}{x^2+1}\,(2x)}{(\ln(x^2+1))^2}}$$