$$((\sec A)^2 - 4\,(\tan A)^2) * (3 - 4(\sin A)^2) = (1 - 4(\sin A)^2) * (3 - (\tan A)^2)$$

Reveal the brackets:

$$3\,(\sec A)^2 - 4(\sin A)^2 * (\sec A)^2 - 12\,(\tan A)^2 + 16\,(\tan A)^2 * (\sin A)^2$$
$$= 3 - (\tan A)^2 - 12(\sin A)^2 + 4(\sin A)^2 * (\tan A)^2$$

We know, that $(\sec A)^2 = \frac{1}{(cosA)^2}$

So $(\sin A)^2 * (\sec A)^2 = \frac{(\sin A)^2}{(cosA)^2} = (\tan A)^2$

$$3\,(\sec A)^2 - 4\,(\tan A)^2 - 12\,(\tan A)^2 + 16\,(\tan A)^2 * (\sin A)^2$$
$$= 3 - (\tan A)^2 - 12(\sin A)^2 + 4(\sin A)^2 * (\tan A)^2$$

$$3((\sec A)^2 - 1) - 15\,(\tan A)^2 = -12(\sin A)^2 - 12(\sin A)^2 * (\tan A)^2$$

As we know $1 + (\tan A)^2 = (\sec A)^2$

That is why $(\sec A)^2 - 1 = (\tan A)^2$

$$3\,(\tan A)^2 - 15\,(\tan A)^2 = -12(\sin A)^2 * (1 + (\tan A)^2)$$

$$-12\,(\tan A)^2 = -12(\sin A)^2 * (\sec A)^2$$

$$(\tan A)^2 = (\tan A)^2$$

$$1 = 1$$

Proved