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iv) $2i(1-i) + (\sqrt{3} - i) + (1+i) + \frac{?}{1+i}$

Question ~~item~~ incomplete

b) $z = (4+7i)(3-2i)$
 $= 12 - 14i^2 - 8i + 21i$
 $= 26 + 13i$

$$r = \sqrt{26^2 + 13^2} = \sqrt{845}$$

$$\arg(z) = \tan^{-1} \frac{13}{26}$$
$$= 0.463$$

$$z = \sqrt{845} \angle 0.463 \text{ radians} \quad \text{or} \quad z = \sqrt{845} \angle 26^\circ \text{ degrees}$$

c) $\frac{1+3i}{1+i} = \frac{1+3i}{1+i} \cdot \frac{1-i}{1-i}$

$$= \frac{1-3i-i-3i^2}{1-i^2+i-i} = \frac{4-4i}{2}$$
$$= \underline{\underline{2-2i}}$$

FIN