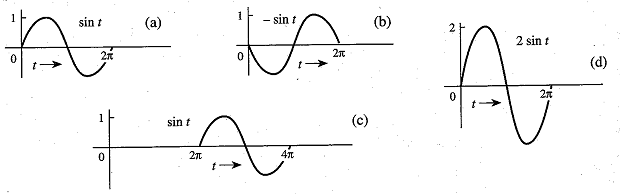
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| --- | --- |
|  | JAYPEE UNIVERSIY OF ENGINEERING & TECHNOLOGY **TUTORIAL SHEET-1**  **COMMUNICATION SYSTEM (10B11EC514)** |



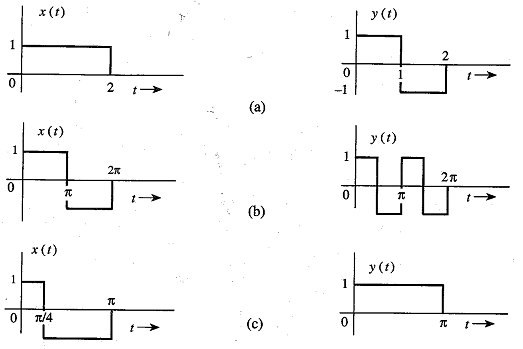
**Q 1**. Find the energies of the signals shown in **Fig. 1**. Comment on the effect on energy of sign change, time shifting or doubling of the signal. What is the effect on the energy if the signal is multiplied by ***k***?



**Fig. 1**

**Q 2**. **(a)** Find  and, the energies of the signals and shown in **Fig. 2a**. Sketch the signals and and show that the energies of either of these two signals are equal to . Repeat the procedure for the signal pair of **Fig 2b.**

**(b)** Repeat the procedure for the signal pair of **Fig 2c**. Are the energies of the signals and identical in this case?

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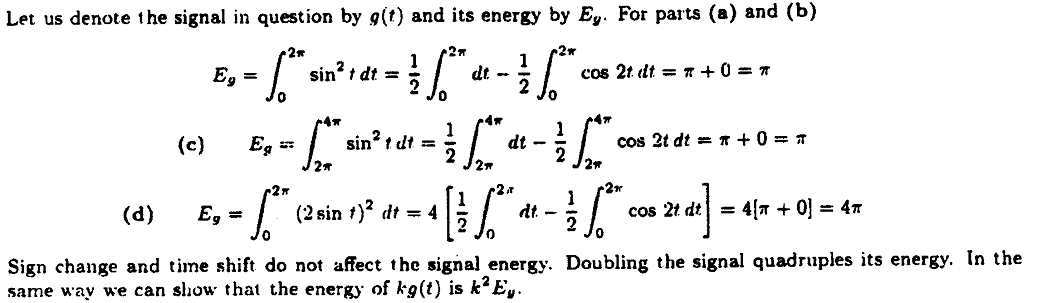
**Fig. 2**

**Q 3.** Determine the power and the rms value for each of the following signals:

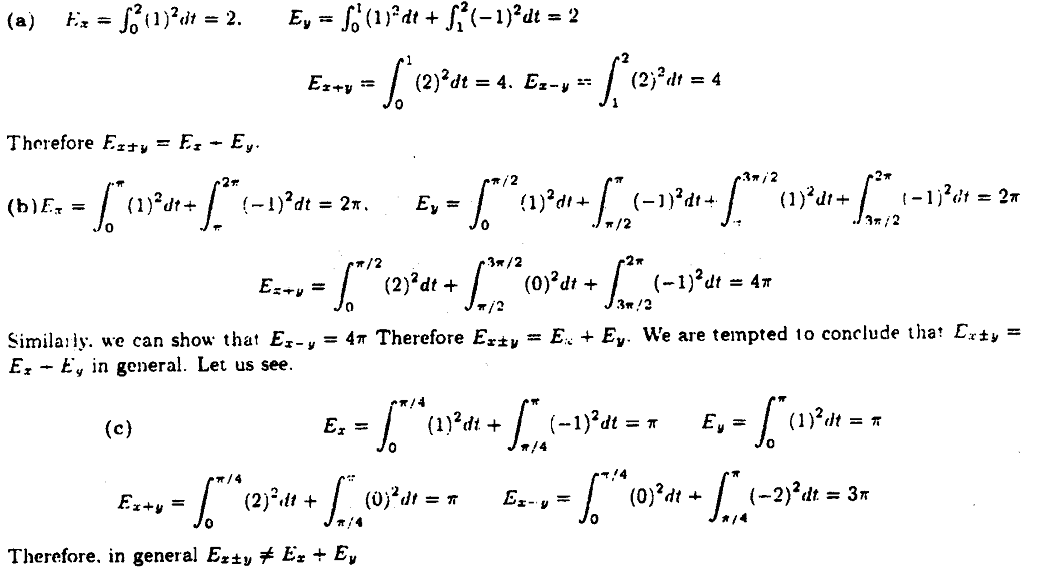
1. **(d)**
2. **(e)**
3. **(f)**

Solution

**Q 1.**



**Q 2.**



**Q 3.**

