

Solutions

2.1 A Distinguish signal reception, transduction and response. Amplification can allow a small extracellular change to produce a larger intracellular effect. Different receptors or pathways can give different responses to one signal.

2.2 fold change= $50/10=5$.

2.3 False. A receptor is not interchangeable with every signalling molecule. Greater signal concentration does not imply unlimited response once the system saturates.

2.4 receptor. receptor means A molecule that binds a compatible signal.

3.1 Threefold final value and 200% increase. Signal amplification, saturation and normalization can alter response; receptor abundance needs its own measurement.