PHYS 301 Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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|  | **The Lorentz Transformation Equations for Pairs of Events** |

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| http://edugen.wiley.com/edugen/courses/crs4957/halliday9118/halliday9088c37/math/math089.gif |
| Frame *S′* moves at velocity *v* relative to frame *S*. |

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1. Elephants have a gestation period of 21 months. Suppose that a freshly impregnated elephant is placed on a spaceship and sent toward a distance space jungle at v = 0.75C. If we monitor radio transmissions from the spaceship, how long after launch might we expect to hear the first squealing trumpet from the newborn calf?