7.1 $m = 4\ kg$

a) $F = 4N$, $a = ?$

$F = ma$

$4 = 4a$

$\boxed{a = 1\ m/s^2}$

b) $F = 8N$, $a = ?$

$F = ma$

$8 = 4a$

$\boxed{a = 2\ m/s^2}$

c) $F = 12N \Rightarrow \boxed{a = 3\ m/s^2}$

7.3 $F = 60\ lb$

$m = ?$

a) $a = 4\ ft/s^2$

$F = ma$

$60 = m(4)$

$\boxed{m = 15\ slugs}$

b) $a = 8\ ft/s^2$

$F = ma$

$60 = m(8)$

$\boxed{m = 7.5\ slugs}$

c) $a = 12\ ft/s^2$

$F = ma$

$60 = m(12)$

$\boxed{m = 5\ slugs}$

7.5 $F_1 = 60N$

$a_1 = 10\ m/s^2$

$F_2 = ?$

$a_2 = 2\ m/s^2$

$F_1 = ma_1$

$60 = (m)(10)$

$m = 6\ slugs$

$F_2 = ma_2$

$= 6(2)$

$\boxed{F_2 = 12N}$