Page 76-77 41, 43, 53-61 odd only

41) Lower

43) 6540 J 10x the mass 10x the energy.

53) $Q = 0.89 \times 29.2 \times (41.5 - 27.2)$

$Q = 0.89 \times 29.2 \times 14.3$

$Q = 371.6\ J = 370\ J$ or $3.7 \times 10^2\ J$

$\frac{371.6\ J}{\frac{1\ cal}{4.184\ J}} = 88.81\ cal = 89\ cal$

55) $100. = 0.14 \times 25 \times \Delta T$

$100. = 3.5 \times \Delta T$

$\frac{100.}{3.5} = \Delta T \quad \Delta T = 28.57\ ^\circ C = 29\ ^\circ C$

57) $\frac{0.24\ J}{\frac{1\ cal}{4.184\ J}} = 0.05736 = 0.057\ cal/g \cdot ^\circ C$

59) gold = .13 J/g°c iron = .45 J/g°c aluminum = .89 J/g°c
Gold takes the least amt of energy so it will end up hottest; Aluminum takes the most amount of energy and will coolest.

61) $133 = S \times 5.00 \times (55.1 - 25.2)$

$133 = S \times 5.00 \times 29.9$

$133 = S \times 149.5$

$\frac{133}{149.5} = S \quad S = .8896 = 0.89\ J/g^\circ C =$ Aluminum