Karatsuba Multiplication (Fast)

Apply the Karatsuba multiplication algorithm. Fill in each blank with the appropriate value.

$a_L\ a_R \qquad b_L\ b_R$

1203 * 4536

c_2 = (_____ * _____) n = _____

c_0 = (_____ * _____)

c_1 = (_____ + _____) * (_____ + _____) – _____ – _____

return _____ + _____ + _____ = _____

$c_2(10^n) + c_1(10^{n/2}) + c_0$

$a_L\ a_R \qquad b_L\ b_R$

_____ * _____

c_2 = (_____ * _____) n = _____

c_0 = (_____ * _____)

c_1 = (_____ + _____) * (_____ + _____) – _____ – _____

return _____ + _____ + _____ = _____

$c_2(10^n) + c_1(10^{n/2}) + c_0$

$a_L\ a_R \qquad b_L\ b_R$

_____ * _____

c_2 = (_____ * _____) n = _____

c_0 = (_____ * _____)

c_1 = (_____ + _____) * (_____ + _____) – _____ – _____

return _____ + _____ + _____ = _____

$c_2(10^n) + c_1(10^{n/2}) + c_0$

$a_L\ a_R$ $b_L\ b_R$

_____ * _____

c_2 = (_____ * _____) n = _____

c_0 = (_____ * _____)

c_1 = (_____ + _____) * (_____ + _____) – _____ – _____

return _____ + _____ + _____ = _____

$c_2(10^n) + c_1(10^{n/2}) + c_0$