Simultaneous equation

Q1. Three chews and four bubblies cost 72p. Five chews and two bubblies cost 64p. What would three chews and five bubblies cost?

Q2. On a nut-and-bolt production line, all the nuts weighed the same and all the bolts weighed the same. An order of 50 nuts and 60 bolts weighed 10.6 kg. An order of 40 nuts and 30 bolts weighed 6.5 kg. What should an order of 60 nuts and 50 bolts weigh?

Q3. A taxi firm charges a fixed amount plus so much per mile. A journey of 6 miles costs £3.70. A journey of 10 miles costs £5.10. What would be the cost of a journey of 8 miles?

Q4. Two members of the same church went to the same shop to buy material to make Christingles. One bought 200 oranges and 220 candles at a cost of £65.60. The other bought 210 oranges and 200 candles at a cost of £63.30. They only needed 200 of each. How much should it have cost them?

Q5. A post office charges £12 for 3 first class mail and 2 second class mail. I paid £15 for 4 first class mail and 1 second class mail. How much does it cost to post 6 first class and 5 second class mail?

Q6. When you book Bingham Hall for a conference, you pay a fixed booking fee plus a charge for each delegate at the conference. The total charge for a conference with 65 delegates was £192.50. The total charge for a conference with 40 delegates was £180. What will be the charge for a conference with 70 delegates?

Q7. My friend uses this formula to cook a turkey: $T = a+bW$ where T is the cooking time (minutes), W is the weight of the turkey (kg), and a and b are constants. She says it takes 4 hours 30 minutes to cook a 12 kg turkey, and 3 hours 10 minutes to cook an 8 kg turkey. How long will it take to cook a 5 kg turkey?

Q8. Use the general rule for dividing powers of the same number, ax/ ay = $ax–y$, to prove that any number raised to the power zero is 1.