Pre-Calculus 11 Section 3.5 – Quadratic Word Problems

Tips for doing quadratic word problems
1. Draw a picture (If possible)
2. Define variable(s) and setup equation(s)
3. Solve the equation(s)
4. Relate your solution(s) back to the problem

Ex 1 A 30cm by 50cm picture has a frame surrounding it. If the frame is the same width all around, and the total area of the frame and picture is 1836 cm^2, how wide is the frame?

Ex 2 The sum of a number and three times its reciprocal is $\frac{28}{3}$. What is the number?

Ex 3 Mr. Raoul bikes to work, while Ms. Anderson drives to work, but they both live 8km away from the school. If they both leave at the same time, Ms. Anderson gets to school 12 minutes before Mr. Raoul. If Ms. Anderson drives 15km/h faster than Mr. Raoul can bike, what is the speed of each of them (answer to 1 decimal place)?

Ex 4 Mr. G and Mrs. Holman are marking PC 11 exams. Mrs. Holman can mark a class set of exams 10 minutes faster than Mr. G can. If they both work together, they can mark a class set in 1 hour. How long does it take each of them to mark a class set of exams (answer to the nearest minute)?