Year 9 Mathematics	Assignment 2	Date Due:

1. Solve:

2. (a) $\frac{x}{7} = 2$ (b) $3x - 5 = 9$ (c) $\frac{x}{3} = \frac{2}{5}$ (d) $5(x + 2) - 3(x - 5) = 4$

    (e) $\frac{x}{6} - \frac{x}{5} = 1$

3. Expand and collect like terms:
   (a) $2y(y + 3) + 5(7 - 3y)$ (b) $6(n - 3) - 5(n - 2)$
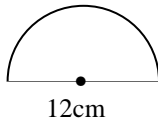
4. Factorise fully:
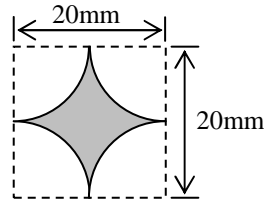   (a) $15x - 20y$ (b) $3m^2 + 6m$ (c) $7 - 14y$

5. Simplify:
   (a) $16 : 22$ (b) $16kg : 800g$ (c) $0.03 : 0.2$

6. Find the area and perimeter of each shape (to 1 decimal place)
   (a)   (b)

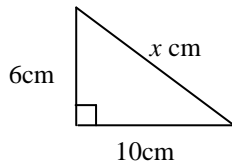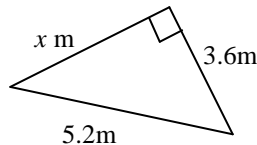7. Find the value of x correct to one decimal place:
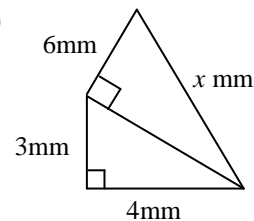   (a)   (b)   (c)

8. Express each of these as a simple rate:
   (a) 200 km in 8 hours   (b) 1000 revolutions in 2 minutes

9. (a) Water flows into a tank at the rate of 15L/h. How long will it take to fill a tank which holds 750L?
   (b) Divide $20 in the ratio 2 : 3
   (c) Alex has saved $50. His savings increase in the ratio 5 :4 in the following week and then in the ratio 6: 5 the next week. How much does he have at the end of those two weeks?

10. If 5cm represents 1km, what length would be used to represent:
    (a) 3km   (b) 5km   (c) 200m

11. Using a scale of 1 : 500, what actual lengths would each of these lines represent?
    (a) 4cm   (b) 6.5cm   (c) 3.25cm