Start

Go through review sheet 6

Main

Forming and Solving Algebraic Equations

eg1 5 subtract 3 times a number is equal to $\overset{3.5\text{ times}}{\text{the}}$ same number, subtract 8. What is the number?

$$5 - 3x = 3.5x - 8$$
$$5 = 6.5x - 8$$
$$13 = 6.5x$$
$$\boxed{2 = x}$$

eg2 A cell phone company offers two different plans.

Plan A
Monthly fee of $28
30 free minutes
$0.45 per additional minute

Plan B
Monthly fee of $40
No free minutes
$0.25 per additional minute

write an equation to determine the time in minutes that results in the same monthly cost for each plan, then solve the equation.

let m = # of minutes

$$28 + 0.45(m-30) = 40 + 0.25m$$

$$28 + 0.45m - 13.5 = 40 + 0.25m$$
$$14.5 + 0.45m = 40 + 0.25m$$
$$14.5 + 0.2m = 40$$
$$0.2m = 25.5$$
$$m = 127.5 \text{ minutes}$$

Do 10 tickets worksheet.