

Representing situations as equations

WHAT THIS LESSON TEACHES

Turn a word story into an equation with a letter for the unknown, then solve by working backwards.

- Double a number, add 5, and get 17 becomes $2n + 5 = 17$.
- Treble a number, take away 4, and get 11 becomes $3n - 4 = 11$.

MODEL THIS ON THE BOARD

SOLVE THE TAXI FARE PUZZLE

- 1 Start with the story: start fee 4 plus 2 per km equals 16.
- 2 Write the equation: $4 + 2k = 16$.
- 3 Undo by taking 4 from both sides: $2k = 12$.
- 4 Undo by halving both sides: $k = 6$.

ANSWER KEY

a) $2n + 5 = 17$

b) 5

c) 7

Q1: 8

Q2: 9

Q3: 5

Q4: 5 euro

Q5: 10 euro

a) Always — That is the rule for this lesson skill.

b) Never — You must undo by subtracting 5 first then halving.

c) Sometimes — It depends on the story numbers but stays in range.

d) Always — That is how we verify the solution for this skill.

EXTENSION SHEET · STRETCH ANSWERS

S1: $x = 12$

S2: $x = 11$

S3: $x = 9$

S4: $x = 15$