

# Jack and Jill

File RA2-12

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Year 8

Curriculum connections

Linear and non-linear relationships

- 1) Plot linear relationships on the Cartesian plane with and without the use of digital technologies (ACMNA193)
  - a. completing a table of values, plotting the resulting points and determining whether the relationship is linear
  - b. finding the rule for a linear relationship<sup>[SEP]</sup>
- 2) Solve linear equations using algebraic and graphical techniques. Verify solutions by substitution (ACMNA194)
  - a. solving real life problems by using variables to represent unknowns



Jack  
has

Learning intentions

1. Linear graphing
2. Interpreting  $y = mx + c$
3. Determining values from the graph

**\$5 and receives \$1 per week.**

**Jill has \$2 and receives \$2 per week.**

**When will they both have the same amount of money?**

**Solve in 2 different ways and explain all your thinking.**

Homer has \$250 in his bank account and decides to deposit \$20 of his earnings each week into his account as savings.

Marge also has an account at the same bank with \$200 in it and she adds \$25 per week.

**When will their accounts both have the same amount of money in them?**

**Show all your working out and thinking.**

Fred has \$825 in his bank account and decides to deposit \$20 of his earnings each week into his account as savings.

Wilma also has an account at the same bank with \$750 in it and she adds \$30 per week.

**When will their accounts both have the same amount of money in them?**

**Show all your working out and thinking.**