

Games and activities

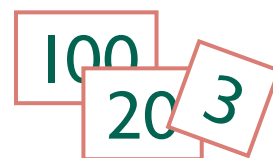
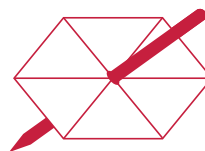
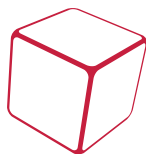
Pupils can use the following activities and games to generate their own exercises using die, spinners and place value cards. Such involvement helps pupils' motivation but needs care because:

- each game should precisely target the particular skill required
- the additions generated will not be well graded and easier problems may not come first
- assessment should be built into the activity.

Pupils should have a basic competence before trying these activities. Assessment could take the form of self- and peer-assessment with pairs of pupils working together to throw the dice, do the addition and then compare their answers.

You will need the following resources.

- six-sided blank dice
- blank hexagonal spinners
- sets of place value cards



Step 1: Two-digit subtraction no exchange

Ask the pupils to work in pairs. Provide each pupil with their own pair of dice, spinners or packs of place value cards.

- Pupil A has values 60, 70, 70, 80, 80, 90 and 6, 7, 7, 8, 8, 9.
- Pupil B has values 10, 20, 20, 30, 30, 40 and 1, 2, 2, 3, 3, 4.
- Pupil A throws their two dice, spins their two spinners or selects one card from each pack to create a 2-digit number, such as 77. (The selected cards are then returned to the packs.)
- Pupil B creates a second 2-digit number, such as 32, using their own dice, spinners or cards.

They subtract their two numbers independently and compare their answers. If they agree, they continue with another subtraction. If they disagree, they work out the correct answer before continuing.

Step 2: Three-digit subtraction no exchange

Repeat the Step 1 activity, using a third dice, spinner or set of cards for each pupil.

- Pupil A has extra values 600, 700, 700, 800, 800, 900.
- Pupil B has extra values 100, 200, 200, 300, 300, 400.

Step 3: Three-digit subtraction exchanging 1 ten for 10 units

Repeat the Step 1 activity, using three dice, spinners or sets of cards for each pupil.

- Pupil A has values 600, 700, 700, 800, 800, 900 and 60, 70, 70, 80, 80, 90 and 1, 2, 2, 3, 3, 4.
- Pupil B has values 100, 200, 200, 300, 300, 400 and 10, 20, 20, 30, 30, 40 and 6, 7, 7, 8, 8, 9.

Games and activities continued

Step 4: Three-digit subtraction exchanging 1 hundred for 10 tens

Repeat the Step 1 activity, using three dice, spinners or sets of cards for each pupil.

- Pupil A has values 600, 700, 700, 800, 800, 900 and 10, 20, 20, 30, 30, 40 and 6, 7, 7, 8, 8, 9.
- Pupil B has values 100, 200, 200, 300, 300, 400 and 60, 70, 70, 80, 80, 90 and 1, 2, 2, 3, 3, 4.

Step 8: Three-digit subtraction exchanging twice, adjacent digits

Repeat the Step 1 activity, using three dice, spinners or sets of cards for each pupil.

- Pupil A has values 600, 700, 700, 800, 800, 900 and 10, 20, 20, 30, 30, 40 and 1, 2, 2, 3, 3, 4.
- Pupil B has values 100, 200, 200, 300, 300, 400 and 60, 70, 70, 80, 80, 90 and 6, 7, 7, 8, 8, 9.

Subtraction in context

These activities can be set in the context of buying an item in a shop.

Ask the pupils to work in pairs.

- Pupil A is the customer and generates the amount money available for spending.
- Pupil B is the shopkeeper and generates the cost of the item.

The answer to the subtraction is how much money Pupil A has left after buying the item.

All amounts are in pounds, £.