# Games and activities

Pupils can use the following activities and games to generate their own exercises using six-sided blank die. These can be given different values to target specific skills. Such involvement helps pupils' motivation but needs care because:

- each game should precisely target the particular skill required
- the multiplications 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 multiplication and then compare answers.

## Step 1: Two-digit × one-digit no carrying

Ask the pupils to work in pairs.

- Pupil A has two dice labelled 10, 10, 20, 20, 30, 30 and 1, 1, 2, 2, 3, 3.
- Pupil B has one dice labelled 2, 2, 2, 3, 3, 3.
- Pupil A rolls the two dice and generates the number to be multiplied, for example, 23.
- Pupil B rolls the single dice and generates the multiplier, for example, 2.
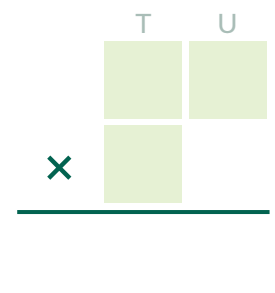
They position the dice on the template in the appropriate positions, write the multiplication and do the calculation separately. They compare their answers. If they agree, they continue with another multiplication. If they disagree, they work out the correct answer before continuing.

## Steps 2 and 3: Two-digit × one-digit carrying units to tens

Ask the pupils to work in pairs.

- Pupil A has two dice labelled 10, 10, 20, 20, 30, 30 and 1, 2, 3, 4, 5, 6.
- Pupil B has one dice labelled 2, 3, 4, 5, 6, 7.

The activity proceeds as for Step 1.

## Steps 8 and 9: Three-digit × one-digit carrying twice

Ask the pupils to work in pairs.

- Pupil A now has three dice labelled 100, 100, 200, 200, 300, 300 and 0, 10, 20, 30, 40, 50 and 1, 2, 3, 4, 5, 6.
- Pupil B has one dice labelled 2, 3, 4, 5, 6, 7.

The activity proceeds as for Step 1. Not all the generated multiplications will involve carrying twice.

## Multiplication in context

These activities can be set in the context of buying multiple items (such as a box of chocolate bars). Ask the pupils to work in pairs.

- Pupil A generates the cost of one item.
- Pupil B generates how many items are bought.
- The answer to the multiplication gives the total cost.

For example, one bag contains a mixture of 10p, 20p (or for harder multiplications, 50p) coins. A second bag contains a mixture of 1p, 2p and 5p coins.

- Pupil A selects one coin from each bag to give the two-digit cost of one item.
- Pupil B rolls a dice labelled 2, 3, 4, 5, 6, 7 to give the number of items bought.
- They work out the total cost of all the items.