## 

## You need: a classmate

## ACTIVITY ONE

Six children from a Tauranga judo club are taking part in a competition.
Points and penalties are awarded in the following way:

| Points | Penalties |  |  |
| :--- | ---: | :--- | ---: |
| ippon | 10 | hansoko-make | -10 |
| waza-ari | 5 | keikohu | -5 |
| yuko | 2 | chui | -2 |
| koka | 1 | shido | -1 |

Here are the first-round scores of the Tauranga competitors:

| Jason | Emily | Ruth | Ben | Kate | Tom |
| :--- | :--- | :--- | :--- | :--- | :--- |
| ippon | keikohu | chui | yuko | koka | ippon |
| koka | chui | ippon | koka | yuko | ippon |
| chui | waza-ari | shido | hansoko-make | chui | keikohu |
| koka | yuko | yuko | chui | chui | shido |
| yuko | chui | koka | koka | ippon | yuko |
| keikohu | shido | chui | yuko | chui | keikohu |

1. a. What are their scores after the first round?
b. Share with a classmate your strategies for calculating each person's points.
2. a. Which competitors' scores combine to equal Tom's score?
b. How far ahead is Tauranga's highest scoring competitor from their lowest scoring clubmate?
3. What is Ben and Emily's combined score?
4. What is the club's total score so far?

|  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Jason | Emily | Ruth | Ben | Kate | Tom |
| waza-ari | hansoko-make | keikohu | yuko | koka | chui |
| yuko | chui | koka | koka | keikohu | koka |
| hansoko-make | keikohu | yuko | keikohu | chui | yuko |
| chui | waza-ari | yuko | yuko | yuko | ippon |
| ippon | waza-ari | ippon | chui | ippon | shido |
| koka | hansoko-make | yuko | waza-ari | koka | ippon |

1. a. What are their scores for the second round?
b. What is the difference between the highest and lowest scores?
2. a. What is the club's score for round two?
b. What is the club's total score so far?

The final round has triple points and penalties, but each competitor is only allowed to count two scores.
Tauranga's main opposition, the Counties-Manukau club, finishes with 157 points. Emily injured herself during round two and has withdrawn from the competition.

1. Design a possible scoring sheet for round three for the five remaining Tauranga competitors so that their club overtakes Counties-Manukau by up to 10 points. You must include at least three penalties for the whole team. (For example, Jason could be ippon, chui, giving $30+{ }^{-} 6=24$ points.)
2. What is your score for the Tauranga club for this round?
3. What is your total score for the Tauranga club?
