ANSWERS

STARTER: Multiplying by 10, 100 and 1000

$71 \times 1,000 > 71 \times 100$

(71,000)   (7,100)

$100 \times 32 < 16 \times 1,000$

(3,200)   (16,000)

$48 \times 100 < 48 \times 10 \times 10 \times 10$

(4800)   (48,000)
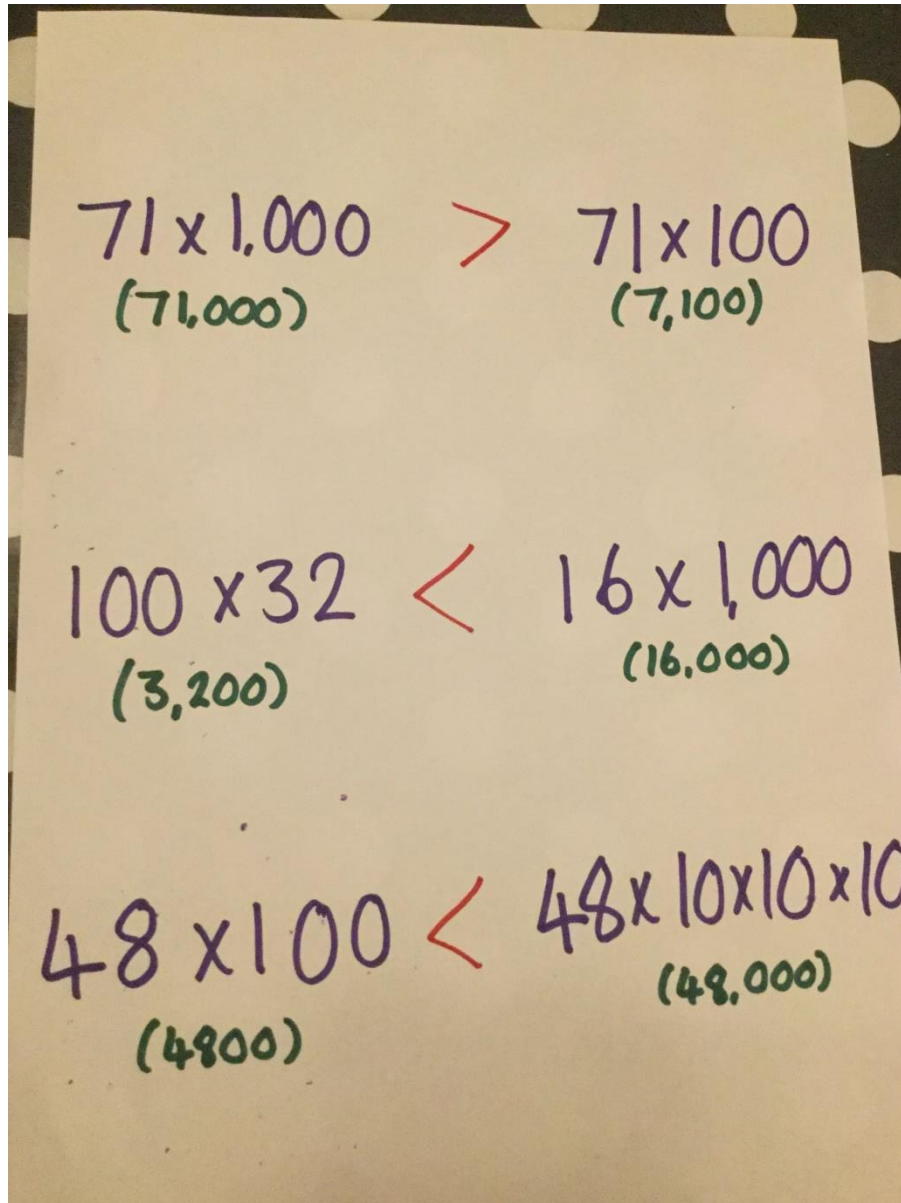
Steppingstone activity
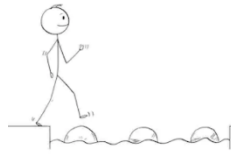
For questions 1a and 1b, children may give varying answers. Their justification for why is the more important aspect.

1a. A tally chart is a quick way to gather data and a bar chart is a way to present the data.
2a. False. In a pictogram the image may have a value of more than 1 so you may have to count in 1s, 2s, 3s, etc.
3a. Show a key giving the value of each image.

1b. A bar chart with crosses would be best as they are quick to do as you sell fruit.
2b. True. As each group of tallies is worth 5, it is essential you can count well in 5s.
3b. Add a title to the last column.

Mild

For questions 4a and 4b, children may give varying answers. Their justification for why is the more important aspect.

4a. A pictogram would be better to present the outcome and the tally chart would be good to collect the votes.
5a. False. A bar chart does not need to have lots of colour, however the colour can help to show the differences in the data.
6a. The scale must run from lowest value at the bottom to highest at the top. It makes comparing the data much easier. The axis should also be labelled as the meaning of the symbols isn't clear.

4b. Fred's idea would be better as it is easy to compare values on a bar chart.
5b. False. Your scale should have standard spacing but does not necessarily need 10, it will vary for your data.
6b. It needs a title. The scale is not appropriate for the data. It would be better to have 0 – 300 broken into smaller amounts as we can only see the values are around 200 but not specific values.

Spicy

For questions 7a and 7b, children may give varying answers. Their justification for why is the more important aspect.

7a. A table with numbers is the best choice to see the precise data.
8a. False. The scale could have intervals of 1, 2 or any number provided that it is consistent.
9a. The final column in the table needs a title and the blank boxes would be better if they had 0 in otherwise it looks incomplete. It also needs a title.

7b. A bar chart is the best choice. It should have a quick way to record, such as crosses (or a tally chart).
8b. False. The axes need to be labelled so that the data is clear and easy to read.
9b. Label the axis, give the chart a title, and the scale should also be evenly spaced.

Red hot

7a. Various answers, for example:
True or false? The black widow is the smallest spider on the table. False, the black widow is one of the smallest in weight, but its leg span is longer than that of the wolf spider.
8a. No, Michael Johnson also finished in under a minute (58.9 seconds).
9a. Keeley is incorrect because route 2 has a total distance of 116,000m and route 3 has a total distance of 118,200km.

7b. Various answers, for example:
True or false? The Peregrine Falcon is the largest and fastest bird on the table. False, although the Peregrine Falcon is the fastest, the Golden Eagle is larger in wingspan and weight.
8b. Yes, Car 3's total was 39 seconds and Car 2's total was 39.4 seconds. There is 0.4 seconds between their total speeds.
9b. Stan is incorrect because Cut Costs has a total distance 26km which is more than the distance to Pet Power of 23km.