What's Best?

Activity One

Ashleigh's class has been exploring multiplication strategies. Her group has come up with the following strategies to solve $4 \times 18 = \square$.

I used *tidy numbers*:
$4 \times 20 = 80$
$80 - (2 \times 4) = 72$

I used *adding on*:
$18 + 18 = 36$
$36 + 18 = 54$
$54 + 18 = 72$

B

A

I used *double and double again*:
$2 \times 18 = 36$
$2 \times 36 = 72$

C

F

E

D

I used *doubling and halving*:
$4 \times 18 = 8 \times 9$
$\qquad = 72$

I used *known facts*:
$2 \times 15 = 30$, so
$4 \times 15 = 60$.
$4 \times 3 = 12$
$60 + 12 = 72$

I used *place value*:
$4 \times 10 = 40$
$4 \times 8 = 32$
$40 + 32 = 72$

1. Discuss with a classmate the advantages and disadvantages of each of the strategies that Ashleigh's group has come up with.

Adding on can take a long time sometimes!

Using different strategies to solve multiplication problems

2. Which way do you think is best to work out 4 x 18? Explain why.

3. Think about how the strategies used by Ashleigh's group would work for 9 x 24. Why do some of the strategies still work well but others don't?
Discuss this with your classmate.

4. **a.** Use at least two methods to work out:

    i. 8 x 26   **ii.** 49 x 7

   b. Explain to a classmate why you chose those strategies.

5. **a.** Now work out these problems, using the strategy you think is best:

    i. 500 x 8   **ii.** 19 x 25

    iii. 27 x 3

   b. Show how each strategy you used works and explain why you think it's the best.
Discuss your strategies with your classmate.

I know a really good strategy for 19 x 25.

19 X 25
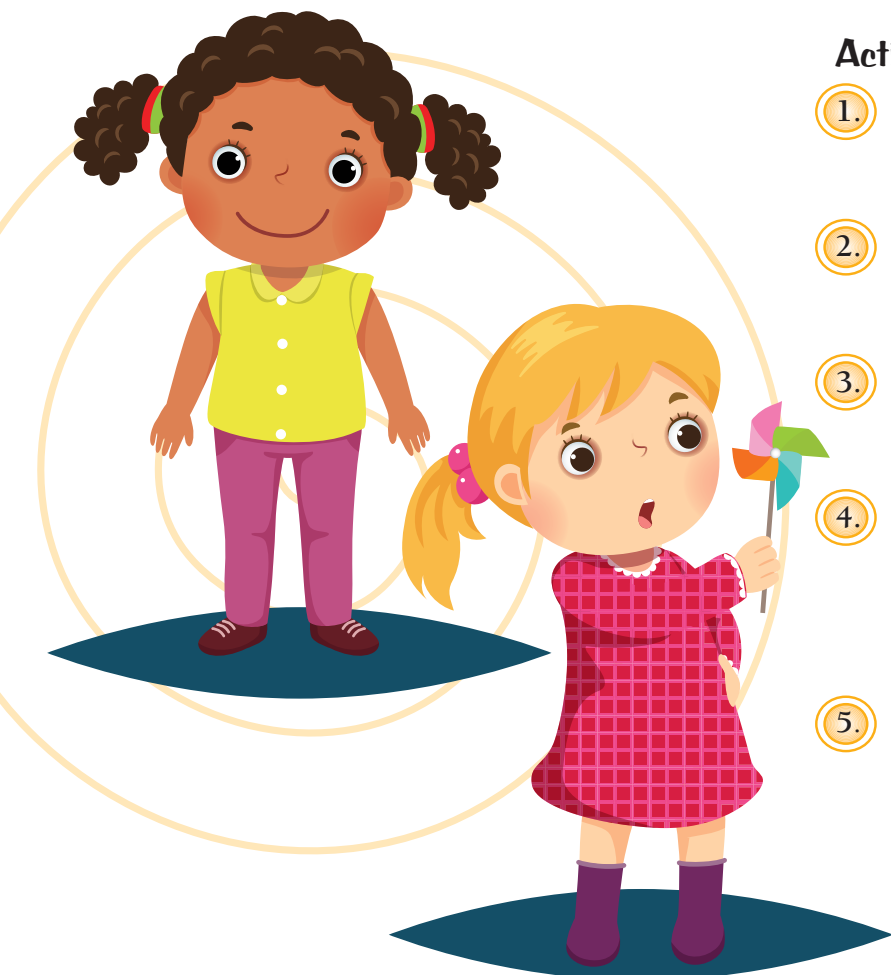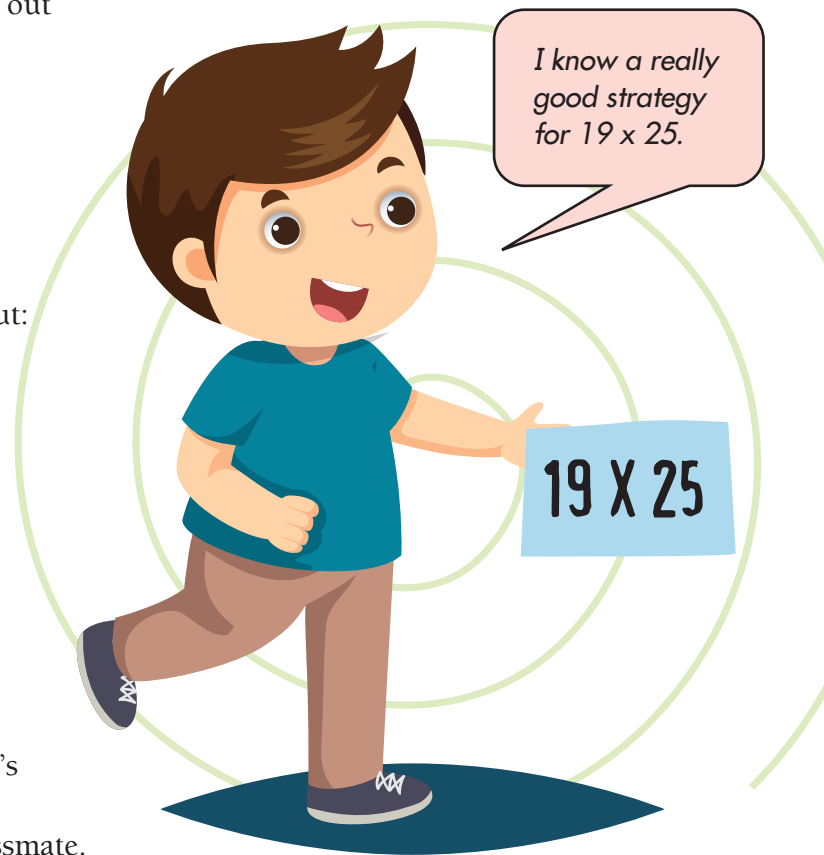
Activity Two

1. Write two multiplication problems that can be best solved using a tidy number strategy.

2. Write two multiplication problems that can be best solved using a doubling strategy.

3. Write two multiplication problems that can be best solved using a place value strategy.

4. What's the same about the problems that are best solved by:

   a. tidy numbers?

   b. doubling and halving?

5. Give your problems to a classmate to solve. Ask them to use the best strategy to solve each problem. Ask them why they think the strategies they chose are the best ones.