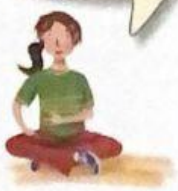
UNIT 24

Division strategies/estimation

We can use **rounding** to the nearest 10 or 100 to estimate division, e.g. 492 ÷ 5: 492 is almost 500, so the answer is about 100. (500 ÷ 5 = 100)

1 Round to 10 or 100 to estimate an answer to each division.

≈ means approximately equal to.



a 99 ÷ 10 ≈ _____
b 62 ÷ 6 ≈ _____
c 29 ÷ 6 ≈ _____
d 39 ÷ 5 ≈ _____
e 22 ÷ 4 ≈ _____
f 41 ÷ 8 ≈ _____
g 41 ÷ 5 ≈ _____
h 82 ÷ 8 ≈ _____
i 399 ÷ 4 ≈ _____
j 199 ÷ 2 ≈ _____
k 499 ÷ 10 ≈ _____
l 207 ÷ 4 ≈ _____
m 212 ÷ 5 ≈ _____
n 313 ÷ 6 ≈ _____
o 293 ÷ 5 ≈ _____

We know that 63 ÷ 7 = 9, so 630 ÷ 7 must equal 90.

150 ÷ 3 = ?
Think 15 ÷ 3 = 5
so 150 ÷ 3 = 50.

2 Extend these division facts.

a 9 ÷ 3 = _____
b 90 ÷ 3 = _____
c 900 ÷ 3 = _____
d 8 ÷ 4 = _____
e 80 ÷ 4 = _____
f 800 ÷ 4 = _____
g 150 ÷ 5 = _____
h 160 ÷ 4 = _____
i 240 ÷ 4 = _____
j 360 ÷ 6 = _____
k 420 ÷ 7 = _____
l 350 ÷ 5 = _____

36 ÷ 4 = ?
Think $\frac{1}{2}$ of 36 = 18.
$\frac{1}{2}$ of 18 = 9

3 Use the halve and halve again strategy to divide by 4.

a 24 ÷ 4 = _____
b 32 ÷ 4 = _____
c 40 ÷ 4 = _____
d 48 ÷ 4 = _____
e 60 ÷ 4 = _____
f 80 ÷ 4 = _____
g 76 ÷ 4 = _____
h 120 ÷ 4 = _____
i 200 ÷ 4 = _____
j 240 ÷ 4 = _____
k 180 ÷ 4 = _____
l 220 ÷ 4 = _____

48 ÷ 8 = ?
Think $\frac{1}{2}$ of 48 = 24.
$\frac{1}{2}$ of 24 = 12
$\frac{1}{2}$ of 12 = 6

4 Use the halve, halve again and halve again strategy to divide by 8.

a 40 ÷ 8 = _____
b 32 ÷ 8 = _____
c 64 ÷ 8 = _____
d 80 ÷ 8 = _____
e 120 ÷ 8 = _____
f 200 ÷ 8 = _____
g 240 ÷ 8 = _____
h 320 ÷ 8 = _____
i 480 ÷ 8 = _____

5 Tick (✓) the estimates you think are reasonable and cross (✗) the ones you think are wrong.

a 49 km ÷ 5 ≈ 10 km ☐
b 151 kg ÷ 3 ≈ 60 km ☐
c 239 tonnes ÷ 6 ≈ 40 tonnes ☐
d 1490 m ÷ 10 ≈ 150 m ☐
e 160 hrs ÷ 8 ≈ 2 hrs ☐
f 185 mins ÷ 3 ≈ 60 mins ☐