Know and use mental addition and subtraction strategies for integers

1 Ron is working out 46 + 28 mentally.

> 46 + 20 is equal to 66

> Then I am going to add on the 8. 66 + 8 = 74

Work out the additions mentally.

You could use a method similar to Ron's.

a) 53 + 12 = **65**

b) 44 + 42 = **86**

c) 35 + 43 = **78**

d) 47 + 25 = **72**

e) 39 + 25 = **64**

f) 27 + 18 = **45**

g) 76 + 19 = **95**

h) 13 + 25 + 48 = **86**

2 Eva is trying to work out 240 + 320 mentally.

Write the steps she might follow to work it out.

e.g.

> 200+300=500

> 500+40 =540

> 540+20 =560

3 Brett imagines a number line in his head to add two 3-digit numbers.
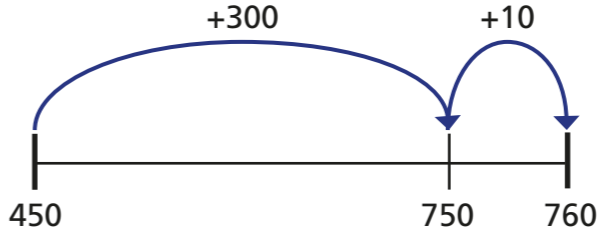
What two numbers do you think Brett is trying to add together?

450 and **310**

4 Work out the additions mentally.

a) 300 + 450 = **750**

b) 310 + 250 = **560**

c) 430 + 360 = **790**

d) 180 + 320 = **500**

e) 680 + 170 = **850**

f) 450 + 390 = **840**

5 Work out the additions mentally.

Then write the steps in your thinking.

a) 170 + 570 = **740**

b) 250 + 250 + 380 = **880**

6 Amir wants to add together 72 and 99

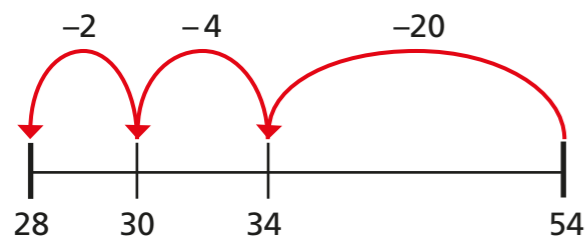*I added 100 to 72 and then subtracted 1*

So the answer is 171

Amir is correct.
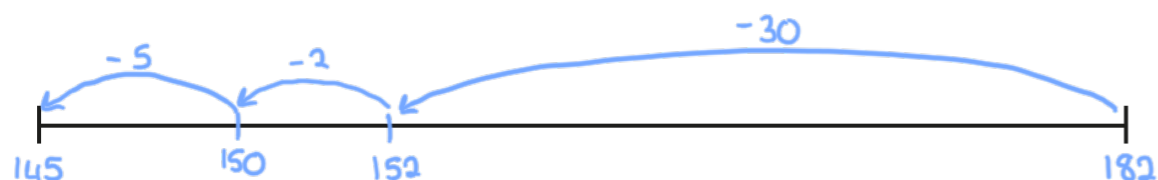
Explain why Amir's method works.

7 Use a method similar to Amir's method in question 6 to work out the additions mentally.

a) 65 + 99 = 164

e) 54 + 98 = 152

b) 99 + 38 = 137

f) 97 + 438 = 535

c) 156 + 99 = 255

g) 732 + 190 = 922

d) 99 + 294 = 393

h) 199 + 237 = 436

8 The number line shows what Kim does mentally to work out 54 − 26

−2   − 4   −20

28   30   34   54

Show the calculation you might do mentally to work out 182 − 37

− 5   − 2   − 30

145   150   152   182

9 Here are some subtractions.

Work them out mentally.

a) 48 − 26 = 22

f) 356 − 99 = 257

b) 270 − 160 = 110

g) 8 − 12 = −4

c) 380 − 182 = 198

h) 150 − 78 = 72

d) 72 − 29 = 43

i) 1,000 − 276 = 724

e) 320 − 260 = 60

Talk about your method with a partner.

10 Rosie is working out 244 − 99 mentally.

244 − 100 = 144
144 − 1 = 143

The answer is 143
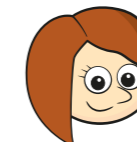
Explain Rosie's mistake.

11 Work out the calculations mentally.

a) 274 kg − 99 kg = 175 kg

b) £200 − £156 = £ 44

c) 1 litre − 270 ml = 730 ml

d) 374 × 2 = 748

e) £25,000 + £176,000 = £ 201,000

f) £10,000 − £3,725 = £ 6,275