

Day 6: Estimating answers using near doubles.

Estimating answers using near doubles

Example 1

Double 135

$$135 + 135 =$$

$$(100 + 100) + (30 + 30) + (5 + 5) =$$

$$200 + 60 + 10 =$$

$$200 + 70 = 270$$

Example 2

Double 162

$$162 + 162 =$$

$$(100 + 100) + (60 + 60) + (2 + 2) =$$

$$200 + 120 + 4 =$$

$$320 + 4 = 324$$

We can use doubling to estimate the answer when adding two numbers that are close to each other.

Example 3

Estimate the answer to 112 + 114

Round off to the nearest 10

$$112 \quad 110$$

$$110 \quad 110$$

Double the answer

$$110 + 110 =$$

$$(100 + 100) + (10 + 10) + (0 + 0)$$

$$200 + 10$$

$$210$$

Example 4

Estimate the answer to 2990 + 2998

Round off each number to the nearest thousand

$$2990 \quad 3000$$

$$2998 \quad 3000$$

Double the answer

$$3000 + 3000 =$$

$$(3000 + 3000) + (0 + 0) + (0 + 0) + (0 + 0)$$

$$3000 + 3000$$

$$6000$$

Please complete:

Activity 2 Page 98, number 4 a to d

Activity 3 Page 98, number 5 a to d

Day 6: Memo

Activity 2 Page 98:

4a) $143+143 = \square$

$$(100+40+3) + (100+40+3)$$

$$100+100 = \mathbf{200}$$

$$40+40 = \mathbf{80}$$

$$3+3 = \mathbf{6}$$

$$200+80+6$$

$$= \mathbf{286}$$

4b) $241+241 = \square$

$$(200+40+1) + (200+40+1)$$

$$200+200 = \mathbf{400}$$

$$40+40 = \mathbf{80}$$

$$1+1 = \mathbf{2}$$

$$400+80+2$$

$$= \mathbf{482}$$

$$4c) 168+168 = \square$$

$$(100+60+8) + (100+60+8)$$

$$100+100 = \mathbf{200}$$

$$60+60 = \mathbf{120}$$

$$8+8 = \mathbf{16}$$

$$200+120+16$$

$$200+100+20+10+6$$

$$300+30+6$$

$$= \mathbf{336}$$

$$4d) 452+452 = \square$$

$$(400+50+2) + (400+50+2)$$

$$400+400 = \mathbf{800}$$

$$50+50 = \mathbf{100}$$

$$2+2 = \mathbf{4}$$

$$800+100+4$$

$$900+4$$

$$= \mathbf{904}$$

Look at example 3 and 4 in the block above.

Activity 3 Page 98:

5a) $223+224 = \square$

$223=220$

$224=220$

$220+220$

$(200+20) + (200+20)$

$200+200=400$

$20+20=40$

$400+40$

$=440$

5b) $148+149 = \square$

$148=150$

$149=150$

$150+150$

$(100+50) + (100+50)$

$100+100=200$

$50+50=100$

$200+100$

$=300$

$$5c) 263+264 = \square$$

$$263=\mathbf{260}$$

$$264=\mathbf{260}$$

$$260+260$$

$$(200+60) + (200+60)$$

$$200+200=\mathbf{400}$$

$$60+60=\mathbf{120}$$

$$400+120$$

$$400+100+20$$

$$500+20$$

$$=\mathbf{520}$$

$$5d) 345+350 = \square$$

$$345=\mathbf{350}$$

$$350=\mathbf{350}$$

$$350+350$$

$$(300+50) + (300+50)$$

$$300+300=\mathbf{600}$$

$$50+50=\mathbf{100}$$

$$600+100$$

$$=\mathbf{700}$$