

algorithm

$$563 + 129 = 692$$

$$16 \times \underline{\quad} = 48$$

$$42 \div \underline{\quad} = 6$$

$$423$$

$$\begin{array}{r} 423 \\ -67 \\ \hline \end{array}$$

$$356$$

3.Q1



subtrahend

$$148 - \boxed{48} = 100$$

3.Q1



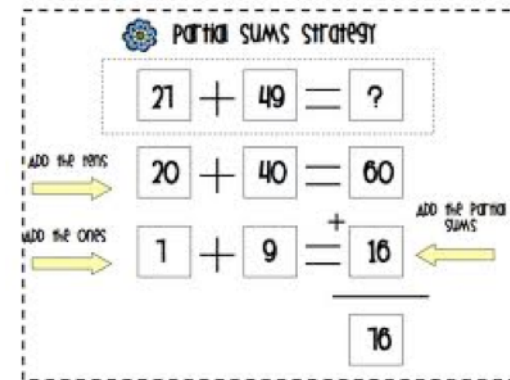
minuend

$$\boxed{148} - 48 = 100$$

3.Q1



partial sums



3.Q1



sum

$$214 + 342 = 556$$

3.Q1



difference

$$582 - 416 = 166$$

3.Q1



addend

$$436 + 59 = 495$$

3.Q1



invented strategies



3.Q1



flexible strategies



3.Q1

order of operations

Multiply

Divide

Add

Subtract

$$8 + 14 \div 7 \times 3 - 5 =$$

$$8 + 2 \times 3 - 5 =$$

$$8 + 6 - 5 =$$

$$14 - 5 =$$

$$9$$

Now, just go left to right!

3.Q1, 3.Q2
3.Q3, 3.Q4

estimation

$$97 - 34 = \underline{\quad}$$

$$100 - 30 = 70$$

3.Q1, 3.Q2
3.Q3, 3.Q4

rounding

Hundreds Chart for Rounding

0	1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47	48	49
50	51	52	53	54	55	56	57	58	59
60	61	62	63	64	65	66	67	68	69
70	71	72	73	74	75	76	77	78	79
80	81	82	83	84	85	86	87	88	89
90	91	92	93	94	95	96	97	98	99

Round down Round up

3.Q1, 3.Q2
3.Q3, 3.Q4

variable

$$n + 153 = 250$$

$$8 \times n = 24 \qquad 23 - n = 4$$

$$n \div 2 = 10$$

3.Q1, 3.Q2
3.Q3, 3.Q4



unknown

$$n + 153 = 250$$

$$8 \times n = 24 \qquad 23 - n = 4$$

$$n \div 2 = 10$$

3.Q1, 3.Q2
3.Q3, 3.Q4



equation

$$24 + 39 = 9 \times 7$$

$$200 = 400 \div 2$$

3.Q1, 3.Q2
3.Q3, 3.Q4



place value



3.Q1



multiplication

multiplication

coefficients

$$\boxed{3} \times \boxed{5} = 15$$

multiplicand $\times$ multiplier = product

$3 \times 5 = 3 + 3 + 3 + 3 + 3$ (five threes)
 $= 5 + 5 + 5$ (three fives)
 $= 15$

3.Q1



division

$$\begin{array}{r} 17 \\ 2 \overline{) 34} \\ \underline{2} \\ 14 \\ \underline{14} \\ 0 \end{array}$$
$$4 \times 2 = 8$$

3.Q1



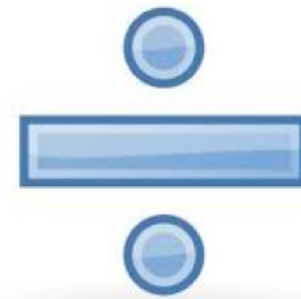
multiplication sign



3.Q1



division sign



3.Q1



array



3.Q1

repeated addition

$$4 + 4 + 4 = 12$$

3.Q1

factor

$$\boxed{6} \times \boxed{3} = 18$$

3.Q1

product

$$6 \times 3 = \boxed{18}$$

3.Q1

repeated
subtraction

$$12 = 4 - 4 - 4$$

3.Q1



quotient

$$8 \div 4 = 2$$

quotient

3.Q1, 3.Q2



dividend

$$15 \div 3 = 5$$

3.Q1, 3.Q2
3.Q3, 3.Q4



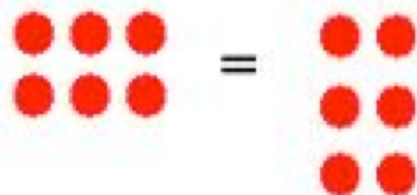
divisor

$$15 \div 3 = 5$$

3.Q1, 3.Q2
3.Q3, 3.Q4



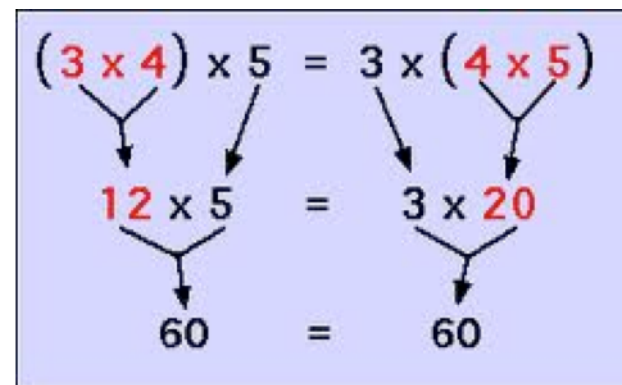
commutative property


$$\begin{array}{rcl} 2 \times 3 & = & 3 \times 2 \\ 6 & = & 6 \end{array}$$

3.Q1, 3.Q2



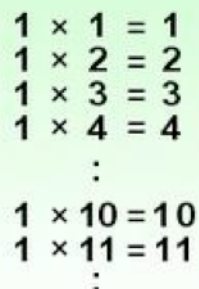
associative property


$$\begin{array}{rcl} (3 \times 4) \times 5 & = & 3 \times (4 \times 5) \\ 12 \times 5 & = & 3 \times 20 \\ 60 & = & 60 \end{array}$$

3.Q1, 3.Q2



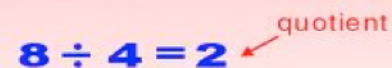
identity property


$$\begin{array}{l} 1 \times 1 = 1 \\ 1 \times 2 = 2 \\ 1 \times 3 = 3 \\ 1 \times 4 = 4 \\ \vdots \\ 1 \times 10 = 10 \\ 1 \times 11 = 11 \\ \vdots \end{array}$$

3.Q1, 3.Q2



quotient


$$8 \div 4 = 2$$

3.Q1, 3.Q2



arithmetic pattern

	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

the same!

3.Q1, 3.Q2
3.Q3, 3.Q4



analog clock



3.Q1, 3.Q2,
3.Q3, 3.Q4



digital clock



3.Q1, 3.Q2
3.Q3, 3.Q4



A.M.



3.Q1, 3.Q2
3.Q3, 3.Q4



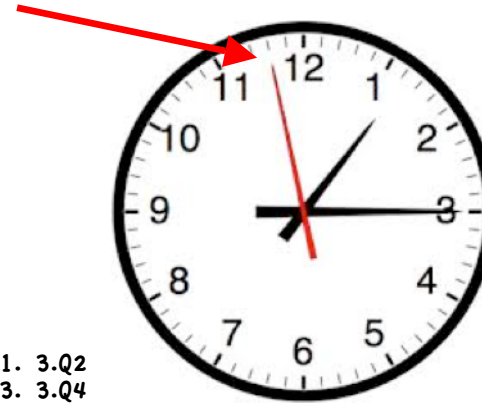
P.M.



3.Q1. 3.Q2
3.Q3. 3.Q4



second



3.Q1. 3.Q2
3.Q3. 3.Q4



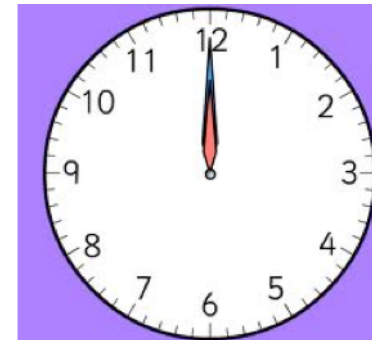
minute



3.Q1. 3.Q2
3.Q3. 3.Q4



hour



3.Q1. 3.Q2
3.Q3. 3.Q4



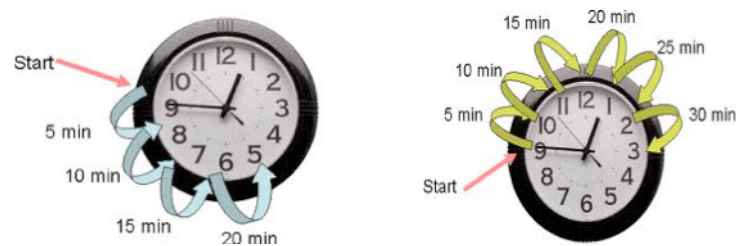
elapsed time



3.Q1. 3.Q2
3.Q3. 3.Q4



elapsed time



3.Q1. 3.Q2
3.Q3. 3.Q4

