YEAR 8 FOUNDATION

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-skill development-

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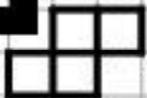
F01 the addition algorithm

F01.1 Calculate the following additions.

a.	$456 + 2072$	b.	$431 + 1094$	c.	$742 + 2072$	d.	$454 + 1037$
e.	$1466 + 219$	f.	$3558 + 835$	g.	$2552 + 3075$	h.	$631 + 2087$
i.	$543 + 3038$	j.	$377 + 3024$	k.	$1231 + 388$	l.	$3555 + 3071$
m.	$282 + 2037$	n.	$2276 + 2092$	o.	$3291 + 3031$	p.	$2634 + 799$
q.	$2422 + 3096$	r.	$3153 + 672$	s.	$1695 + 351$	t.	$236 + 1091$

Answers

a. 2528 b. 1525 c. 2814 d. 1491 e. 1685 f. 4393 g. 5627 h. 2718 i. 3581 j. 3401 k. 1619 l. 6626
m. 2319 n. 4368 o. 6322 p. 3433 q. 5518 r. 3825 s. 2046 t. 1327

Helpful Information

Strategy for addition algorithm with carrying

1. Write the numbers on top of each other so digits with the same place value are lined up. Draw a plus sign on the left and a horizontal line under the sum
2. Start by adding the ones digits
   a. If the answer is less than 10 write the answer directly underneath the ones column
   b. If the answer is greater than 10, write the ones value of the answer directly underneath the ones column and "carry" the tens value on top of the tens column
3. Continue in this way with the tens, then hundreds, then the thousands etc, when carrying, carry into the next highest column

Examples

Question: 456+2072

Working out: Using the above strategy…

$$\begin{array}{r} \overset{1}{}456 \\ +2072 \\ \hline 2528 \end{array}$$

Answer: 2528

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F02 the subtraction algorithm

Questions – Part 1 of 2 – Subtraction algorithm with borrowing

F02.1 Calculate the following subtractions. The expected detail in your working is demonstrated in the examples on the right.

a. $1854 - 791$
b. $1341 - 527$
c. $1119 - 551$
d. $1126 - 727$
e. $883 - 357$
f. $610 - 133$
g. $720 - 374$
h. $1214 - 728$
i. $922 - 563$
j. $765 - 593$
k. $566 - 237$
l. $1450 - 799$
m. $1392 - 577$
n. $1249 - 555$
o. $810 - 685$
p. $1155 - 696$
q. $880 - 236$
r. $1154 - 467$
s. $1170 - 196$
t. $1223 - 551$

Answers

a. 1063 b. 814 c. 568 d. 399 e. 526 f. 477 g. 346 h. 486 i. 359 j. 172 k. 329 l. 651 m. 815
n. 694 o. 125 p. 459 q. 644 r. 687 s. 974 t. 672

Helpful Information

Strategy for subtraction algorithm with borrowing:

1. Write the numbers on top of each other so digits with the same place value are lined up. Draw a take away sign on the left and a horizontal line under the sum
2. Start by subtracting the bottom ones digit from the top
   a. If the bottom ones digit is smaller than the top ones digit then write the answer directly underneath the ones column
   b. If the bottom ones digit is bigger than the top ones digit then you will need to "borrow" from the tens column. This involves reducing the top tens value by 1* and then adding ten ones to the ones column, allowing you to now complete the subtraction of the bottom digit from the top number
3. Continue in this way with the tens, then hundreds, then the thousands etc.

*Note that this will not always be possible as there could be a zero in the tens place. This case is discussed separately in Part 2 of 2 below.

Example

Question: 1854-791

Working out: Using the above strategy…

$$
\begin{array}{r}
1\,\overset{7}{\cancel{8}}5 4 \\
- 7 9 1 \\
\hline
1 0 6 3
\end{array}
$$

Answer: 1063

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