

Coded Sentence

Fundamentally this is just a new way of testing and using the four rules of negative numbers. The questions have been printed without brackets as it seems less confusing. It might be best to point out and remind about the order of operations before starting. This is an activity best done without calculators. There are several different true statements that can be made from the ten words. Two are given below.

Topics: Negative numbers
Ages: 11 to 13

SOLUTION:

-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z

1a	1b	1c	1d	1e
4	-6	9	5	10
S	I	X	T	Y

2a	2b	2c	2d	2e
-2	-6	-1	6	4
M	I	N	U	S

3a	3b	3c	3d	3e
5	-6	-2	-10	4
T	I	M	E	S

4a	4b	4c	4d	4e	4F
-10	2	6	-14	-3	4
E	Q	U	A	L	S

5a	5b	5c	5d	5e
5	-7	3	-10	-10
T	H	R	E	E

6a	6b	6c	6d	6e
-2	-6	-1	6	4
M	I	N	U	S

7a	7b	7c	7d
1	-3	6	4
P	L	U	S

8a	8b	8c	8d
-9	0	6	3
F	O	U	R

9a	9b	9c	9d
-9	-6	7	-10
F	I	V	E

10a	10b	10c	10d	10e
5	-6	-2	-10	4
T	I	M	E	S

MINUS THREE TIMES MINUS FOUR TIMES PLUS FIVE EQUALS SIXTY

There are other correct possibilities

e.g. **MINUS THREE TIMES PLUS FOUR TIMES FIVE EQUALS MINUS SIXTY**

2a: $-6 + 4$
4b: $-10 \div -5$
7c: $4 - -2$
8d: *Half of 4c*
10b: $-11 + 5$

1 Coded Sentence

1a: $3 - -1$
3b: $18 \div -3$
5d: *Same as 3d*
8c: $8 + -2$
10a: $-10 \div -2$

3 Coded Sentence

4d: -2×7
5c: $-9 + 12$
2c: $-5 \div 5$
7d: *Twice 4b*
9c: $-5 - -12$

5 Coded Sentence

3d: $-3 - 7$
1e: $-13 + 23$
6c: *Same as 2c*
7a: $-4 \div -4$
9b: $-9 + 3$

7 Coded Sentence

1c: -3×-3
3e: $-1 + 5$
5a: *Half of 1e*
6b: $-8 - -2$

9 Coded Sentence

Write out the alphabet and then under each letter write a number starting with A = -14 up to Z = +11.

These values are needed to make ten words from the answers to the sums.

11 Coded Sentence

3a: $-10 + 15$
4a: $-6 - 4$
5e: -5×2
8b: $-8 + 8$
10c: *Same as 2a*

2 Coded Sentence

2b: -3×2
4c: $-11 + 17$
6e: *Same as 1a*
7b: -1×3
9d: $-12 + 2$

4 Coded Sentence

1b: $-10 - -4$
3c: *Same as 6a*
6d: -2×-3
8a: 3×-3
10d: *Same as 4a*

6 Coded Sentence

9a: *Same as 8a*
4e: $12 \div -4$
2d: $3 - -3$
1d: $-20 \div -4$
10e: *6a squared*

8 Coded Sentence

4f: $-9 + 13$
2e: -2×-2
5b: *Half of 4d*
6a: $8 \div -4$

10 Coded Sentence

Each of the ten sets of coded letters, 1a, 1b, 1c, 1d, 1e etc. spells out a word.

Arrange these ten words in at least one way to make a true statement.

12 Coded Sentence