

---

CONVERSION DISPLAY

Infix Expression	POSTFIX Expression	Stack Contents (Top to Bottom)
8-3+5	Empty	Empty
-3+5	8	Empty
3+5	8	-
+5	83	-
5	83-	+
Empty	83-5	+
Empty	83-5+	Empty

EVALUATION DISPLAY

POSTFIX Expression	Stack Contents (Top to Bottom)
83-5+	Empty
3-5+	8
-5+	3 8
5+	5
+	5 5
Empty	10

ORIGINAL EXPRESSION AND THE ANSWER:    8-3+5 = 10

# CONVERSION DISPLAY

Infix Expression	POSTFIX Expression	Stack Contents (Top to Bottom)
8-(3+5)	Empty	Empty
- (3+5)	8	Empty
(3+5)	8	-
3+5)	8	( -
+5)	83	( -
5)	83	+ ( -
)	835	+ ( -
Empty	835+	-
Empty	835+-	Empty

# EVALUATION DISPLAY

POSTFIX Expression	Stack Contents (Top to Bottom)
835+-	Empty
35+-	8
5+-	3 8
+-	5 3 8
-	8 8
Empty	0

ORIGINAL EXPRESSION AND THE ANSWER:  $8-(3+5) = 0$

# CONVERSION DISPLAY

Infix Expression	POSTFIX Expression	Stack Contents (Top to Bottom)
3+4*5	Empty	Empty
+4*5	3	Empty
4*5	3	+
*5	34	+
5	34	* +
Empty	345	* +
Empty	345*	+
Empty	345*+	Empty

# EVALUATION DISPLAY

POSTFIX Expression	Stack Contents (Top to Bottom)
345*+	Empty
45*+	3
5*+	4 3
*+	5 4 3
+	20 3
Empty	23

ORIGINAL EXPRESSION AND THE ANSWER: 3+4\*5 = 23

# CONVERSION DISPLAY

Infix Expression	POSTFIX Expression	Stack Contents (Top to Bottom)
3*7-4/2	Empty	Empty
*7-4/2	3	Empty
7-4/2	3	*
-4/2	37	*
4/2	37*	-
/2	37*4	-
2	37*4	/ -
Empty	37*42	/ -
Empty	37*42/	-
Empty	37*42/-	Empty

# EVALUATION DISPLAY

POSTFIX Expression	Stack Contents (Top to Bottom)
37*42/-	Empty
7*42/-	3
*42/-	7 3
42/-	21
2/-	4 21
/-	2 4 21
-	2 21
Empty	19

ORIGINAL EXPRESSION AND THE ANSWER: 3\*7-4/2 = 19

# CONVERSION DISPLAY

Infix Expression	POSTFIX Expression	Stack Contents (Top to Bottom)
(7+2)*3	Empty	Empty
7+2)*3	Empty	(
+2)*3	7	(
2)*3	7	+ (
)*3	72	+ (
*3	72+	Empty
3	72+	*
Empty	72+3	*
Empty	72+3*	Empty

# EVALUATION DISPLAY

POSTFIX Expression	Stack Contents (Top to Bottom)
72+3*	Empty
2+3*	7
+3*	2 7
3*	9
*	3 9
Empty	27

ORIGINAL EXPRESSION AND THE ANSWER: (7+2)\*3 = 27

# CONVERSION DISPLAY

Infix Expression	POSTFIX Expression	Stack Contents (Top to Bottom)
3*(2-6)	Empty	Empty
* (2-6)	3	Empty
(2-6)	3	*
2-6)	3	( *
-6)	32	( *
6)	32	- ( *
)	326	- ( *
Empty	326-	*
Empty	326-*	Empty

# EVALUATION DISPLAY

POSTFIX Expression	Stack Contents (Top to Bottom)
326-*	Empty
26-*	3
6-*	2 3
-*	6 2 3
*	-4 3
Empty	-12

ORIGINAL EXPRESSION AND THE ANSWER:  $3*(2-6) = -12$

# CONVERSION DISPLAY

Infix Expression	POSTFIX Expression	Stack Contents (Top to Bottom)
(2+3)*(6-4)	Empty	Empty
2+3)*(6-4)	Empty	(
+3)*(6-4)	2	(
3)*(6-4)	2	+ (
)*(6-4)	23	+ (
* (6-4)	23+	Empty
(6-4)	23+	*
6-4)	23+	( *
-4)	23+6	( *
4)	23+6	- ( *
)	23+64	- ( *
Empty	23+64-	*
Empty	23+64-*	Empty

# EVALUATION DISPLAY

POSTFIX Expression	Stack Contents (Top to Bottom)
23+64-*	Empty
3+64-*	2
+64-*	3 2
64-*	5
4-*	6 5
-*	4 6 5
*	2 5
Empty	10

ORIGINAL EXPRESSION AND THE ANSWER:  $(2+3)*(6-4) = 10$

# CONVERSION DISPLAY

Infix Expression	POSTFIX Expression	Stack Contents (Top to Bottom)
(3+4)*8-(7*3-4)	Empty	Empty
3+4)*8-(7*3-4)	Empty	(
+4)*8-(7*3-4)	3	(
4)*8-(7*3-4)	3	+ (
)*8-(7*3-4)	34	+ (
*8-(7*3-4)	34+	Empty
8-(7*3-4)	34+	*
-(7*3-4)	34+8	*
(7*3-4)	34+8*	-
7*3-4)	34+8*	( -
*3-4)	34+8*7	( -
3-4)	34+8*7	* ( -
-4)	34+8*73	* ( -
4)	34+8*73*	- ( -
)	34+8*73*4	- ( -
Empty	34+8*73*4-	-
Empty	34+8*73*4--	Empty

# EVALUATION DISPLAY

POSTFIX Expression	Stack Contents (Top to Bottom)
34+8*73*4--	Empty
4+8*73*4--	3
+8*73*4--	4 3
8*73*4--	7
*73*4--	8 7
73*4--	56
3*4--	7 56
*4--	3 7 56
4--	21 56
--	4 21 56
-	17 56
Empty	39

ORIGINAL EXPRESSION AND THE ANSWER: (3+4)\*8-(7\*3-4) = 39



# CONVERSION DISPLAY

Infix Expression	POSTFIX Expression	Stack Contents (Top to Bottom)
$4*3/2+4*5*2-8/4/2$	Empty	Empty
$*3/2+4*5*2-8/4/2$	4	Empty
$3/2+4*5*2-8/4/2$	4	*
$/2+4*5*2-8/4/2$	43	*
$2+4*5*2-8/4/2$	43*	/
$+4*5*2-8/4/2$	43*2	/
$4*5*2-8/4/2$	43*2/	+
$*5*2-8/4/2$	43*2/4	+
$5*2-8/4/2$	43*2/4	* +
$*2-8/4/2$	43*2/45	* +
$2-8/4/2$	43*2/45*	* +
$-8/4/2$	43*2/45*2	* +
$8/4/2$	43*2/45*2*+	-
$/4/2$	43*2/45*2*+8	-
$4/2$	43*2/45*2*+8	/ -
$/2$	43*2/45*2*+84	/ -
$2$	43*2/45*2*+84/	/ -
Empty	43*2/45*2*+84/2	/ -
Empty	43*2/45*2*+84/2/	-
Empty	43*2/45*2*+84/2/-	Empty

# EVALUATION DISPLAY

POSTFIX Expression	Stack Contents (Top to Bottom)
$43*2/45*2*+84/2/-$	Empty
$3*2/45*2*+84/2/-$	4
$*2/45*2*+84/2/-$	3 4
$2/45*2*+84/2/-$	12
$/45*2*+84/2/-$	2 12
$45*2*+84/2/-$	6
$5*2*+84/2/-$	4 6
$*2*+84/2/-$	5 4 6
$2*+84/2/-$	20 6
$*+84/2/-$	2 20 6
$+84/2/-$	40 6
$84/2/-$	46
$4/2/-$	8 46
$/2/-$	4 8 46
$2/-$	2 46
$/-$	2 2 46
$-$	1 46
Empty	45

ORIGINAL EXPRESSION AND THE ANSWER:  $4*3/2+4*5*2-8/4/2 = 45$

# CONVERSION DISPLAY

Infix Expression	POSTFIX Expression	Stack Contents (Top to Bottom)
5*((9/3+1)*(6-4))+1	Empty	Empty
*((9/3+1)*(6-4))+1	5	Empty
((9/3+1)*(6-4))+1	5	*
(9/3+1)*(6-4))+1	5	( *
9/3+1)*(6-4))+1	5	( ( *
/3+1)*(6-4))+1	59	( ( *
3+1)*(6-4))+1	59	/ ( ( *
+1)*(6-4))+1	593	/ ( ( *
1)*(6-4))+1	593/	+ ( ( *
)*(6-4))+1	593/1	+ ( ( *
*(6-4))+1	593/1+	( *
(6-4))+1	593/1+	* ( *
6-4))+1	593/1+	( * ( *
-4))+1	593/1+6	( * ( *
4))+1	593/1+6	- ( * ( *
))+1	593/1+64	- ( * ( *
)+1	593/1+64-	* ( *
+1	593/1+64-*	*
1	593/1+64-**	+
Empty	593/1+64-**1	+
Empty	593/1+64-**1+	Empty

# EVALUATION DISPLAY

POSTFIX Expression	Stack Contents (Top to Bottom)
593/1+64-**1+	Empty
93/1+64-**1+	5
3/1+64-**1+	9 5
/1+64-**1+	3 9 5
1+64-**1+	3 5
+64-**1+	1 3 5
64-**1+	4 5
4-**1+	6 4 5
-**1+	4 6 4 5
**1+	2 4 5
*1+	8 5
1+	40
+	1 40
Empty	41

ORIGINAL EXPRESSION AND THE ANSWER:  $5*((9/3+1)*(6-4))+1 = 41$

-----  
END OF PROGRAM OUTPUT