RS Aggrawal Solutions for Class 6 Math Chapter 6 Simplification

ANSWER:

Given expression:
= 21 - 12 ÷÷ 3 × 2
= 21 - 4 × 2 [Performing division]
= 21 - 8 [Performing multiplication]
= 13 [Performing subtraction]

Page No 107:

ANSWER:

Given expression:
= 16 + 8 ÷÷ 4 - 2 × 3
= 16 + 2 - 2 × 3 [Performing division]
= 16 + 2 - 6 [Performing multiplication]
= 18 - 6 [Performing addition]
= 12 [Performing subtraction]

Page No 107:

ANSWER:

Given expression:
= 13 - (12 - 6 ÷ 3)
= 13 - (12 - 2) [Performing division]
= 13 - 10 = 3 [Performing subtraction]

Page No 107:

ANSWER:

Given expression:
= 19 - [4 + {16 - (12 - 2)}]
= 19 - [4 + {16 - 10}] [Removing parentheses]
= 19 - [4 + 6] [Removing braces]

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= 19 - 10 [Removing square brackets]
= 9

Page No 107:

ANSWER:

Given expression:
= 36 - [18 - {14 - (15 - 4 ÷ 2 × 2)}]
= 36 - [18 - {14 - (15 - 2 × 2)}] [Performing division]
= 36 - [18 - {14 - (15 - 4)}] [Performing multiplication]
= 36 - [18 - {14 - 11}] [Removing parentheses]
= 36 - [18 - 3] [Removing braces]
= 36 - 15 [Removing square brackets]
= 21

Page No 107:

ANSWER:

Given expression:
= 27 - [18 - {16 - (5 - 4−14-1)}]
= 27 - [18 - {16 - (5 - 3)}] [Removing bar]
= 27 - [18 - {16 - 2}] [Removing parentheses]
= 27 - [18 - 14] [Removing braces]
= 27 - 4 [Removing square brackets]
= 23

Page No 107:

ANSWER:

Given expression:
$= 4\frac{4}{5} \div 3\frac{5}{} \text{ of } 5 + 45 \times 3\frac{10}{} - 15 = 4\frac{4}{5} \div 3\frac{5}{} \times 5\frac{1}{} + 45 \times 3\frac{10}{} - 15$ (Removing 'of ')
$= 24\frac{5}{} \div 3\frac{1}{} + 45 \times 3\frac{10}{} - 15 = 24\frac{5}{} \times 13 + 45 \times 3\frac{10}{} - 15$
(Removing '÷') $= 85 + 45 \times 3\frac{10}{} - 15$ (Removing '×') $= 85 + 625 - 15$
(Removing '×') $= 40 + 6 - 525 = 41\ 25 = 11\frac{25}{} = 44$
5 ÷35 of 5 + 45×310 - 15= 445 ÷35 × 51 + 45×310 - 15 (Removing 'of ')= 245 ÷31 + 45×310 - 15 =245×13 + 45×310 - 15 (Removing '÷')= 85 + 45×310 - 15 (Removing '×')=85 +625 - 15 (Removing '×')= 40 + 6 - 525 = 41 25 = 11625

Page No 107:

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ANSWER:

Given expression:
$= (23 + 49)\ of\ 35 \div 123 \times 114 - 13 = (6 + 49)\ of\ 35 \div 123 \times 114 - 13$ (Removing parentheses)$= 109 \times 35 \div 123 \times 114 - 13$ (Removing 'of')$= 23 \div 53 \times 114 - 13$ $= 23 \times 35 \times 54 - 13$ (Removing '÷')$= 25 \times 54 - 13$ $= 12 - 13$ (Removing '×')$= (3-2)6 = 16$= 23 + 49 of 35 ÷123× 114 - 13 = 6 +49 of 35 ÷123× 114 - 13
Removing parentheses= 109×35÷123× 114 - 13 Removing 'of'= 23÷53× 114 - 13 =23×35 ×54 - 13 (Removing '÷')= 25×54 - 13 = 12 - 13
(Removing '×')= 3-26 = 16

Page No 107:

ANSWER:

The given expression
$= 713 \div 23\ of\ 215 + 138 \div 234 - 112 = 223 \div 23\ of\ 115 + 118 \div 114 - 32 = 223 \div 23 \times 115 + 118 \div 114 - 32$ (Removing 'of') $= 223 \div 2215 + 118 \div 114 - 32$ $= 223 \times 1522 + 118 \div 114 - 32$ (Removing '÷') $= 5 + 118 \times 411 - 32$ (Removing '÷')$= 5 + 12 - 32$ (On simplifying)$= 10 + 1 - 32 = 82 = 4$ = 713÷23 of 215 + 138 ÷234 - 112 = 223 ÷23 of 115 + 118 ÷ 114 - 32 = 223 ÷23 ×115 + 118 ÷ 114 - 32
Removing 'of' =223 ÷2215 + 118 ÷ 114 - 32 = 223×1522 +118 ÷ 114 - 32 Removing '÷' = 5 + 118 × 411 - 32 Removing '÷'= 5 + 12 - 32 (On simplifying)= 10 +1 -32 = 82 = 4

Page No 107:

ANSWER:

Given expression:
$= 517 - \{3310 \div (245 - 710)\} = 367 - \{3310 \div (145 - 710)\} = 367 - \{3310 \div (28-710)\}$ $= 367 - \{3310 \div 2110\}$ (Removing parentheses)$= 367 - \{3310 \times 1021\}$ (Removing '÷')$= 367 - 117$ (Removing braces)$= 36 - 117 = 257 = 347$ (Simplifying)= 517 - 3310÷245 - 710= 367 - 3310÷145 - 710= 367 - 3310÷28-710 = 367 - 3310÷2110 Removing parentheses= 367 - 3310×1021 Removing '÷'= 367 - 117
Removing braces= 36 - 117 = 257 = 347 (Simplifying)

Page No 107:

Aakash Institute

ANSWER:

Given expression:
$= 9_{34} \div [2_{16} + \{4_{13} - (1_{12} + 1_{34})\}] = 394 \div [136 + \{133 - (32 + 74)\}] = 394 \div [136 + \{133 - (6$ +74)}] = 394 ÷ [136 + {133 − 134}] (Removing p arentheses)= 394 ÷ [136 + {52 −3912}] = 394 ÷ [136 + 1312] (Removing braces)= 394 ÷ [26 +1312] = 394 ÷3912 (Removing square brackets)= 394 × 1239 = 3 (Removing '÷')= 934 ÷ 216 + 413 - 112 + 134 = 39 4 ÷ 136 + 133 - 32 + 74 = 394 ÷ 136 + 133 - 6+74 = 394 ÷ 136 + 133 - 134 Removing parentheses= 394 ÷ 136 + 52 - 3912 = 394 ÷ 136 + 1312 Re moving braces= 394 ÷ 26 +1312 = 394 ÷3912 (Removing square brackets)= 394 × 1239 = 3 (Removing '÷')

Page No 107:

ANSWER:

Given expression:
$= 4_{110} - [2_{12} - \{56 - (25 + 310 - 415)\}] = 4110 - [52 - \{56 - (25 + 310 - 415)\}] = 4110 - [52 - \{56 - (12 + 9 - 8\ 30)\}] = 4110 - [52 - \{56 - 1330\}]$ (R emoving parentheses) $= 4110 - [52 - \{25 - 1330\}] = 4110 - [52 - 1$ 230] (Removing braces)= 4110 − [75 −1230] = 4110 −63 30 (Removing square brackets)= $123 - 6330 =$ $6030 = 2$ = 4110- 212 - 56 - 25 + 310- 415 = 4110 - 52 - 56 - 25 + 310- 415 = 4110 - 52 - 56 - 12 +9 - 8 30 = 4110 - 52 - 56 - 1330 Removing parentheses = 4110 - 52 - 25 - 1330 = 4110 - 52 - 1230 Removi ng braces= 4110 - 75 -1230 = 4110 - 6330 (Removing square brackets)= 123 - 6330 = 6030 = 2

Page No 107:

ANSWER:

Given expression:
$= 1_{56} + [2_{23} - \{3_{34}\ (3_{45} \div 9_{12})\}] = 116 + [83 - \{154\ (195 \div 192)\}] = 116 + [83 - \{154\ (195 \times 219$)}] = 116 + [83 − {154 × 25}] (Removing parenth eses)= 116 + [83 − 32] (Removing braces)

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$= 116 + [16 - 96]$ $= 116 + 76$

(Removing square brackets)$= 186 = 3$

= 156+ 223 - 334 345÷ 912 = 116 + 83 - 154 195 ÷ 192 = 116 + 83 - 154 1 95 × 219 = 116 + 83 - 154 × 25 Removing parenthe ses= 116 + 83 - 32 Removing braces = 116 + 16 - 96 = 116 + 76

(Removing square brackets)= 186 = 3

Page No 107:

ANSWER:

Given expression:

$= 445 \div \{215 - 12(114 - 14 - 15)\} = 245 \div \{115 - 12(54 - 14 - 15)\} = 245 \div \{115 - 12(54 - 120)\}$

(Removing bar) $= 245 \div \{115 - 12(25 - 120)\}$

$= 245 \div \{115 - 12 \times 2420\}$ (Removing parentheses)$=245 \div \{115 - 1220\}$ (Removing '×') $= 245 \div \{44 - 1220\}$

$= 245 \div 3220$

(Removing braces) $= 245 \times 2032$

(Removing '÷')$= 34 \times 4 = 3$

= 445 ÷ 215 - 12114 - 14 - 15= 245 ÷ 115 - 1254 - 14 - 15 = 245 ÷ 115 - 1254 - 120

Removing bar = 245 ÷ 115 - 1225 - 120 = 245 ÷ 115 - 12 × 2420 Removing parentheses=245 ÷ 115 - 1220

Removing '×' = 245 ÷ 44 - 1220

= 245÷3220

Removing braces = 245 × 2032 (Removin g '÷')= 34 × 4 = 3

Page No 107:

ANSWER:

Given expression:

$= 712 - [214 \div \{114 - 12(32 - 13 - 16)\}] = 152 - [94 \div \{54 - 12(32 - 13 - 16)\}] = 152 - [94 \div \{54 - 12(32 - 16)\}]$

(Removing bar) $= 152 - [94 \div \{54 - 12(9 - 16)\}]$

$= 152 - [94 \div \{54 - 12 \times 43\}]$ (Removing p arentheses)$= 152 - [94 \div \{54 - 23\}]$ (Removing '×')

$= 152 - [94 \div \{15 - 812\}]$ (Removing braces)

$= 152 - [94 \div 712]$ $= 1 52 - [94 \times 127]$ (Removing '÷')$= 152 - 277$

(Removing square brackets) $= 105 - 5414 = 511$

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4 = 3914= 712-214÷ 114- 1232 - 13 - 16= 152-94÷ 54- 1232 - 13 - 16= 152-
94÷ 54- 1232 - 16 Removing bar = 152-94÷ 54- 129 -
16 = 152-
94÷ 54- 12×43 Removing parentheses= 152-
94÷ 54- 23 Removing '×' = 152-
94÷ 15 - 812 Removing braces
=152-94÷712 = 152-
94×127 (Removing '÷')= 152 - 277
Removing square brackets = 105 - 5414 =5114 = 3914

Page No 108:

ANSWER:

(c) 18

Explanation:
= 8 + 4 ÷ 2 × 5
= 8 + 2 × 5
= 8 + 10 = 18

Page No 108:

ANSWER:

(b) 12

Explanation:
= 54 ÷ 3 of 6 + 9
= 54 ÷ (3 x 6) + 9
= 54 ÷ 18 + 9
= 3 + 9 = 12

Page No 108:

ANSWER:

(b) 3

Explanation:

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= 13 - (12 - 6 ÷ 3)
= 13 - (12 - 2)
= 13 - 10 = 3

Page No 108:

ANSWER:

(a) 7

Explanation:
= 1001 ÷ 11 of 13
= 1001 ÷ (11 x 13)
= 1001 ÷ 143 = 7

Page No 108:

ANSWER:

(b) 121

Explanation:
Given expression:
= 133 + 28 ÷÷ 7 - 8 × 2
= 133 + 4 - 8 ×2 [Performing division]
= 133 + 4 - 16 [Performing multiplication]
= 137 - 16 [Performing addition]
= 121 [Performing subtraction]

Page No 108:

ANSWER:

(a) 3636

Explanation:
Given expression:
= 3640 - 14 ÷÷ 7 × 2
= 3640 - 2 ×2 [Performing division]
= 3640 - 4 [Performing multiplication]
= 3636 [Performing subtraction]

Page No 108:

Aakash Institute

ANSWER:

(b) 920

Explanation:
Given expression:
= 100 × 10 −- 100 + 2000 ÷÷ 100
= 100 × 10 −- 100 + 20 [Performing division]
= 1000 −- 100 + 20 [Performing multiplication]
= 1020 −-100 [Performing addition]
= 920 [Performing subtraction]

Page No 108:

ANSWER:

(b) 23
Explanation:

Given expression:
= 27 −- [18 −- {16 −- (5 −- 4−14-1)}]
= 27 −- [18 −- {16 −- (5 −- 3)}] (Removing bar)
= 27 −- [18 −- {16 −- 2}] (Removing parentheses)
= 27 −- [18 −- 14] (Removing braces)
= 27 −- 4 (Removing square brackets)
= 23

Page No 108:

ANSWER:

(a) 29
Explanation:
Given expression:
= 32 −- [48 ÷÷ {36 −- (27 −- 16−916-9)}]
= 32 −- [48 ÷÷ {36 −- (27 −- 7)}] (Removing bar)
= 32 −- [48 ÷÷ {36 −-20}] (Removing parentheses)
= 32 −- [48 ÷÷ 16] (Removing braces)
= 32 −- 3 (Removing square brackets)
= 29

Page No 108:

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ANSWER:

(a) 6

Explanation:
Given expression:
= 8 −- [28 ÷ {34 −- (36 −- 18 ÷ 9 × 8)}] [Performing division]
= 8 −- [28 ÷ {34 −- (36 −- 2 × 8)}] [Performing multiplication]
= 8 −- [28 ÷ {34 −- (36 −- 16)}]
= 8 −- [28 ÷ {34 −- 20}] [Removing parentheses]
= 8 −- [28 ÷ 14] [Removing braces]
= 8 −- 2 = 6 [Removing square brackets]

Page No 109:

ANSWER:

We have:
16 - [11 + {8 - (6 -4−24-2)}]
= 16 - [11 + {8 - (6 - 2)}] (Removing bar)
= 16 - [11 + {8 - 4}]
= 16 - [11 + 4] (Removing barces)
= 16 - 15 (Removing square brackets)
= 1

Page No 109:

ANSWER:

We have:
16 + 8 ÷÷ 4 −- 2 ×× 3
= 16 + 2 −- 2 ×× 3 (Division)
= 16 + 2 −- 6 (Multiplication)
= 18 −- 6 (Addition)
= 12

Page No 109:

ANSWER:

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Given expression:

36 - [18 - {14 - (15 - 4 ÷ 2 × 2)}] [Performing division]

= 36 - [18 - {14 - (15 - 2 × 2)}] [Performing multiplication]

= 36 - [18 - {14 - (15 - 4)}]

= 36 - [18 - {14 - 11}] [Removing parentheses]

= 36 - [18 - 3] [Removing braces]

= 36 - 15 [Removing square brackets]

= 21

Page No 109:

ANSWER:

(c) 17

We have:

15 + 5 ÷ 5 x 2

= 15 +1 x 2 (Performing division)

= 15 + 2 (Performing multiplication)

= 17

Page No 109:

ANSWER:

(c) $27_{57}2757$

We have:

16 - 2 ÷ 7 + 6 × 2

= 16 - (27)27 + 6 × 2 [Performing division]

= 16 - (27)27 + 12 [Performing multiplication]

= 28 - (27)27 [Performing addition]

= $281 - 27 = (196 - 2)7 = 1947 = 27_{57}281$ -27 = 196 -

27 = 1947 = 2757 [Performing subtraction]

Page No 109:

ANSWER:

(b)12

We have:

54 ÷ 3 of 6 + 9

= 54 ÷ 18 + 9

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= 3 + 9
= 12

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