Collecting like terms

ANSWERS

1

Simplify $4x + 2 + x + 3$



x	number
$4x + x$	$2 + 3$
$5x$	5

Answer $5x + 5$

2

Simplify $2x + 3y + x + y$



x	y
$2x + x$	$3y + y$
$3x$	$4y$

Answer $3x + 4y$

3

Simplify $6a + 2b - 4a + 3b$

a	b
$6a - 4a$	$2b + 3b$
$2a$	$5b$

Answer $2a + 5b$

4

Simplify $7y + 5 - 3y - 8$

y	number
$7y - 3y$	$5 - 8$
$4y$	-3

Answer $4y - 3$

5

Which of these are like terms with $4x$?
Ring each one.

$7x$ $4y$ x^2

$2x$ 4 $-x$

Answer $7x$, $2x$, $-x$

6

Simplify $3x^2 + 4x + 2x^2 - x$

x^2	x
$3x^2 + 2x^2$	$4x - x$
$5x^2$	$3x$

Answer $5x^2 + 3x$

7

Priya simplifies $4a + 3b$ and writes $7ab$. What has she done wrong?

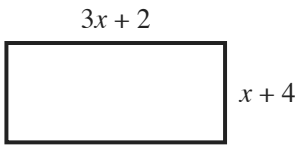
$4a$ and $3b$ are not like terms

so they can't be added

Answer $4a + 3b$

8

Write an expression for the perimeter of this rectangle. Simplify your answer.



$3x + x + 3x + x = 8x$

$2 + 4 + 2 + 4 = 12$

Answer $8x + 12$

Collecting like terms *further practice*

ANSWERS

9

Simplify $5p + 2q - 3p + 4r - q$

$5p - 3p = 2p$, $2q - q = q$

Answer $2p + q + 4r$

10

Simplify $3ab + 2ba - ab$

ba is the same as ab

$3 + 2 - 1 = 4$

Answer $4ab$

11

Simplify $2m - 6n - 5m + n$

$2m - 5m = -3m$

$-6n + n = -5n$

Answer $-3m - 5n$

12

Simplify $4x^2 - 3x + 5 - x^2 + 7x - 2$

$4x^2 - x^2 = 3x^2$, $-3x + 7x = 4x$

$5 - 2 = 3$

Answer $3x^2 + 4x + 3$

13

Find the missing term.

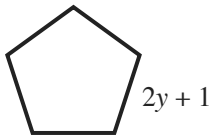
$4x +$ ☐ $- 2y + 3x = 7x + 5y$

$5y + 2y = 7y$

Answer $7y$

14

Each side of this regular pentagon is $2y + 1$. Write an expression for its perimeter.



$2y$ five times is $10y$

1 five times is 5

Answer $10y + 5$

15

A pen costs p pence and a ruler costs r pence. Mo buys 3 pens and 2 rulers. Ella buys 4 pens and 1 ruler. Write an expression for the total they spend.

$3p + 2r + 4p + r$

Answer $7p + 3r$

16

Lee says $5x - 2x + 4 = 7$. Is he right? Explain your answer.

No. $5x - 2x = 3x$

$3x$ and 4 are not like terms

Answer No, it is $3x + 4$