Steady Steps Maths

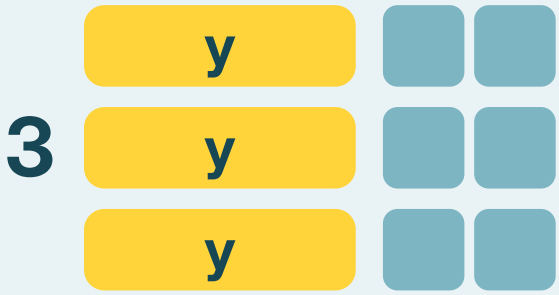
FREE SAMPLE WORKSHEET · TOPIC 8

FREE SAMPLE

Expressions

Free sample worksheet · with answers

GRADE 6



$3(y + 2)$

$= 3y + 6$

Common Core 6.EE.A.2–4

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Quick recap

The big idea from each pack in this topic. Read it first, then try the questions.

Learn it · Pack 1 · Writing expressions

"5 more than n" → n + 5 · "5 less than n" → n − 5 · "3 times n" → 3n
In 4x + 7: 4 is the coefficient, x is the variable and 7 is the constant.

Learn it · Pack 2 · Evaluating

Swap each letter for its value, then follow the order of operations.
3a + 2 when a = 5: 3 × 5 + 2 = **17**

Learn it · Pack 3 · Equivalent expressions

Combine like terms: 4x + 2x = 6x.
Expand: 3(y + 4) = 3y + 12. Factor: 10m + 15 = 5(2m + 3).

PACK 1 Writing Expressions

1 Write an expression for "9 less than k".

Answer

2 Write an expression for "the product of 6 and w".

Answer

3 Write an expression for "p divided by 4, plus 1".

Answer

4 In 5m + 2n + 8, what is the coefficient of n?

Answer

5 How many terms are in 3a + 7b − 4?

Answer

6 A pencil costs 2 and a pen costs 5. Write an expression for the cost of x pencils and y pens.

Answer

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PACK 2 Evaluating Expressions

7 Evaluate $4x - 3$ when $x = 6$.

Answer

8 Evaluate $a^2 + 5$ when $a = 3$.

Answer

9 Evaluate $2m + 3n$ when $m = 4$ and $n = 5$.

Answer

10 Evaluate $24 \div k$ when $k = 8$.

Answer

11 Use $A = lw$ to find the area of a rectangle when $l = 9$ cm and $w = 4$ cm.

Answer

12 A car's distance in km is $d = 60t$, where t is the time in hours. Find d when $t = 2.5$.

Answer

PACK 3 Equivalent Expressions

13 Simplify $7y + 3y - 2y$.

Answer

14 Expand $4(2x + 5)$.

Answer

15 Factor $18a + 12$ using the GCF.

Answer

16 Are $2(n + 3)$ and $2n + 3$ equivalent? Write yes or no.

Answer

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Real life

Read carefully, then show your working

17 A taxi charges 5 to start, plus 2 for each km.
(a) Write an expression for the cost of a trip of k km. (b) How much does an 8 km trip cost?
(c) Huda paid 31. How long was her trip? Try values or work backwards.

Answer

18 A rectangle has a width of w cm. Its length is 3 cm more than its width.
(a) Write an expression for the length. (b) Write an expression for the perimeter and simplify it. (c) Find the perimeter when w = 7.

Answer

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Answer key

For parents · check the steps as well as the final answer

Pack 1	**1)** k − 9 **2)** 6w **3)** p ÷ 4 + 1 **4)** 2 **5)** 3 **6)** 2x + 5y
Pack 2	**7)** 21 **8)** 14 **9)** 23 **10)** 3 **11)** 36 cm² **12)** 150 km
Pack 3	**13)** 8y **14)** 8x + 20 **15)** 6(3a + 2) **16)** no (e.g. n = 1 gives 8 and 5)
Real life	**17)** (a) 5 + 2k (b) 21 (c) 13 km **18)** (a) w + 3 (b) 2w + 2(w + 3) = 4w + 6 (c) 34 cm

Tip: Order matters with “less than”: “9 less than k” is k − 9, not 9 − k.

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Enjoyed this sample?

This sheet has 18 questions. The full topic has 119, plus 10 unit tests.

Everything a Grade 6 student needs on algebraic expressions: writing expressions from words and situations, naming their parts, evaluating them (including formulas), and making and testing equivalent expressions.

What you get	What's inside	Questions
Pack 1 · Writing Expressions	Learn-it boxes, worked examples, practice, word problems, self-check and answer key · Common Core 6.EE.A.2a–b	39
Pack 2 · Evaluating Expressions	Learn-it boxes, worked examples, practice, word problems, self-check and answer key · Common Core 6.EE.A.2c	37
Pack 3 · Equivalent Expressions	Learn-it boxes, worked examples, practice, word problems, self-check and answer key · Common Core 6.EE.A.3–4	43
Complete Topic book	All 3 packs in one book with a contents page	119
10 Unit Tests (A–J)	40 marks each, about 40 minutes, with a mark scheme and a "what to revise" table. **Test A is free.**	18 per test

How to use this sample

1. Let your child read the recap page and try the questions on their own.
2. Mark together with the answer key. Each section shows which pack it comes from.
3. If a section felt hard, that pack is the place to start. If it all felt easy, try the free Unit Test A.

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