Steady Steps Maths

FREE SAMPLE WORKSHEET · TOPIC 7

FREE SAMPLE

Exponents & Order of Operations

Free sample worksheet · with answers

GRADE 6



$$2^5 = 2 \times 2 \times 2 \times 2 \times 2 = 32$$

Common Core 6.EE.A.1

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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 · Powers

An exponent says how many times the base is used as a factor.
$2^5 = 2 \times 2 \times 2 \times 2 \times 2 =$ **32** (not 2×5).

Learn it · Pack 2 · Order of operations

Brackets → Exponents → × and ÷ (left to right) → + and − (left to right).
$3 + 4 \times 2^2 = 3 + 4 \times 4 = 3 + 16 =$ **19**

PACK 1 Powers & Exponents

1 Write $7 \times 7 \times 7 \times 7$ using an exponent.

Answer _____

2 Find the value of 3^4.

Answer _____

3 Find the value of 10^3.

Answer _____

4 Find the value of 0.2^2.

Answer _____

5 Find the value of $(\frac{3}{4})^2$.

Answer _____

6 $\square^3 = 64$. What number goes in the box?

Answer _____

7 Write <, > or =: 2^6 ○ 6^2

Answer _____

8 Write $2 \times 2 \times 2 \times 5 \times 5$ using exponents.

Answer _____

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PACK 2

Order of Operations

9 Evaluate $18 - 4 \times 3$.

Answer

10 Evaluate $(9 + 6) \div 5$.

Answer

11 Evaluate $2 + 3^2 \times 2$.

Answer

12 Evaluate $40 \div 5 \times 2$.

Answer

13 Evaluate $5 \times [12 - (3 + 4)]$.

Answer

14 Evaluate $6^2 \div 4 + 1$.

Answer

15 Add one pair of brackets to make this true: $4 + 6 \times 3 = 30$

Answer

16 Write one expression for "add 8 and 4, then multiply by 5". Find its value.

Answer

Real life

Read carefully, then show your working

17 Noor buys 4 packs of 6 pens and 3 single pens.
(a) Write one expression for the total number of pens. (b) Work it out.
(c) She shares the pens equally among 3 friends. Write one expression with brackets for each friend's share, and work it out.

Answer

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18 A square garden has sides of 9 m. A cube-shaped tank has edges of 3 m.
(a) Write the garden's area as a power and find its value. (b) Write the tank's volume as a power and find its value. (c) Work out $9^2 - 3^3$.

Answer

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Answer key

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

Pack 1	**1)** 7^4 **2)** 81 **3)** 1,000 **4)** 0.04 **5)** $\frac{9}{16}$ **6)** 4 **7)** > (64 and 36) **8)** $2^3 \times 5^2$
Pack 2	**9)** 6 **10)** 3 **11)** 20 **12)** 16 **13)** 25 **14)** 10 **15)** (4 + 6) × 3 = 30 **16)** (8 + 4) × 5 = 60
Real life	**17)** (a) 4 × 6 + 3 (b) 27 (c) (4 × 6 + 3) ÷ 3 = 9 **18)** (a) $9^2 = 81\ m^2$ (b) $3^3 = 27\ m^3$ (c) 54

Tip: The most common slip is reading 2^5 as 2 × 5. Ask your child to write the repeated multiplication out in full.

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Enjoyed this sample?

This sheet has 18 questions. The full topic has 83, plus 10 unit tests.

Everything a Grade 6 student needs on numerical expressions: writing and evaluating powers, then the order of operations with brackets and exponents, inserting brackets, and writing expressions for real situations.

What you get	What's inside	Questions
Pack 1 · Powers & Exponents	Learn-it boxes, worked examples, practice, word problems, self-check and answer key · Common Core 6.EE.A.1	37
Pack 2 · Order of Operations	Learn-it boxes, worked examples, practice, word problems, self-check and answer key · Common Core 6.EE.A.1	46
Complete Topic book	All 2 packs in one book with a contents page	83
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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