

GRADE 5 LEARNING PACK

Factors, Multiples, Primes & Divisibility

Use factors, multiples, prime/composite structure and divisibility reasoning to solve problems efficiently.

LEARN • PRACTISE • CREATE • REFLECT

Original BrightPencil Kids resource - adult-led where appropriate

A4 edition • 12 purposeful pages • review copy

Print. Learn. Grow.

Grown-up guide

Learning objective

Use factors, multiples, prime/composite structure and divisibility reasoning to solve problems efficiently.

Use this pack well

- Model the first example aloud, then let the learner try.
- Ask “How do you know?” more often than “Are you finished?”.
- Use real objects, talk, movement or observation when the activity suggests it.
- Stop or shorten the session if attention or enjoyment drops.
- Open-ended pages can have many successful answers.

Quality note

This resource was written originally for BrightPencil Kids. Curriculum sources informed scope and progression only; no third-party worksheet or story text is reproduced.

Learn the idea

1 Factors divide a number exactly; multiples are generated by multiplying.

2 Prime numbers have exactly two positive factors: 1 and themselves.

3 Divisibility patterns can support reasoning without replacing understanding.

Talk about it

Explain one idea in your own words. Give an example from real life, a drawing or an object if that helps.

List factor pairs of 36 and 48.

Find common factors and common multiples for two numbers.

Classify numbers as prime or composite and justify.

Use divisibility by 2, 3, 5, 9 or 10 to narrow possibilities.

Solve a grouping problem using greatest common factor reasoning informally.

Try it beyond the page

Real-world / hands-on connection

Arrange a small collection of objects into equal rectangular arrays and connect the arrays to factor pairs.

Before you finish

What did you notice?

What evidence, object or example helped you?

What would you change if you tried again?

Create something

Your project

Create a number-property card for one number between 20 and 100: factors, multiples, prime/composite and divisibility clues.

Use this space for planning, drawing, mapping, designing or notes.

CHALLENGE

Think deeper

1. Is 1 prime?

2. What is a common multiple?

3. Why is 42 divisible by 3?

Quick review

1. In one sentence, explain the big idea of “Factors, Multiples, Primes & Divisibility”.

2. Draw or write one example that shows you understand.

3. Choose one activity from this pack and explain the strategy you used.

4. Write one question you still have.

Answer & discussion notes

Use these as guidance, not scripts. Open questions can have different successful responses when the reasoning is sensible and evidence-based.

1. Suggested response

No.

2. Suggested response

A number that is a multiple of each of the numbers being compared.

3. Suggested response

Its digits sum to 6, which is divisible by 3.

Review before publication

Check age fit, factual accuracy, clarity, accessibility, rights provenance and whether the activity works in practice. This file remains a review copy until those checks are signed off.

FINISH

My learning reflection

I finished this BrightPencil learning pack.

One thing I understand better now:

A strategy that helped me:

Something I created or noticed:

My next small question or goal:

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