# **Educational Worksheets Repository**

A comprehensive, organized collection of educational worksheets for all grades and subjects, with professional conversion tools and structured difficulty levels.



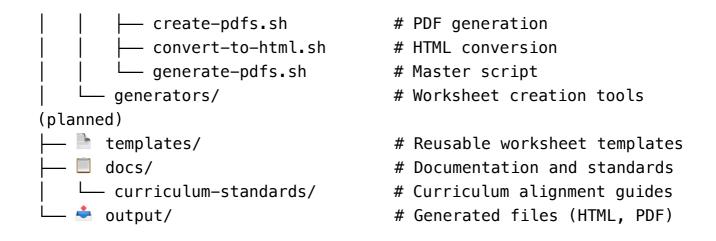
### **Overview**

This repository provides a scalable framework for educational worksheets organized by: - <u>Subject</u> (Mathematics, Science, English, etc.) - <u>Grade Level</u> (Grades 1-12) - <u>Topic</u> (Specific learning areas) - <u>Difficulty</u> (Easy, Medium, Hard)

Perfect for <u>teachers</u>, <u>tutors</u>, <u>homeschooling parents</u>, and <u>students</u>!

# **Repository Structure**

```
educational-worksheets/
worksheets/
                                   # Main worksheet collection
   - mathematics/
                                   # Subject: Mathematics
       – grade-01/
                                  # Grade level
                                  # Mathematical topic
          — topic-name/
             ├─ easy/
                                  # Difficulty: Beginner level
             ├─ medium/
                                  # Difficulty: Intermediate level
             └─ hard/
                                  # Difficulty: Advanced level
     ├── grade-02/ ... grade-12/ # All grade levels
  — science/
                                  # Additional subjects (planned)
   - english/
                                  # Additional subjects (planned)
   - ... (other subjects)
  answer-kevs/
                                  # Complete answer guides
  — mathematics/
     ├── grade-01/ ... grade-12/
    · ... (matching worksheet structure)
 💢 tools/
                                  # Professional conversion tools
   - converters/
                                  # HTML/PDF generation scripts
     ├─ scripts/
```



# 🚀 Quick Start

#### **For Teachers:**

- 1. **Browse** to your subject and grade level
- 2. **Choose** difficulty level appropriate for your students
- 3. <u>Use</u> conversion tools to create PDF versions for printing
- 4. **Check** answer keys for complete solutions

### **For Students:**

- 1. **Find** your grade level and subject
- 2. **Start** with easy difficulty and progress upward
- 3. **Complete** self-assessment sections honestly
- 4. **Check** your work with provided answer keys

## For Parents/Tutors:

- Grade-appropriate content for targeted learning
- Progressive difficulty allows skill building
- Answer keys support home learning

• Real-world applications make learning meaningful



#### Current Content



## Mathematics - Grade 7 (Ready to Use!)

#### **Decimals (Add and Subtract)**

- <u>Location</u>: worksheets/mathematics/grade-07/decimals/medium/
- File: add-subtract-decimals.md
- **Topics**: Basic operations, word problems, estimation
- **Duration**: 45-60 minutes | **40 marks total**

#### **Map Scale**

- Location: worksheets/mathematics/grade-07/map-scale/medium/
- File: map-scale-problems.md
- <u>Topics</u>: Scale interpretation, distance conversion, real-world applications
- **Duration**: 45-60 minutes | 40 marks total

#### **Ratio and Direct Proportion**

- <u>Location</u>: worksheets/mathematics/grade-07/ratiosproportions/medium/
- File: ratio-proportion-problems.md
- <u>Topics</u>: Simplifying ratios, equivalent ratios, proportion problems
- **<u>Duration</u>**: 45-60 minutes | **<u>40 marks total</u>**

#### **Complete Answer Keys**

• Location: answer-keys/mathematics/grade-07/

- File: answer-keys.md
- **Content**: Step-by-step solutions, teaching notes, assessment criteria

# **X** Conversion Tools



### PDF Generation

cd tools/converters

./generate-pdfs.sh # Creates PDF versions of all worksheets

### **HTML Generation**

cd tools/converters/scripts

./convert-to-html.sh # Creates web-friendly versions

## Nrint Optimization

- Professional CSS styling for clean printing
- A4 page optimization
- Proper margins and font sizing
- Chrome headless PDF generation

### **├ Educational Features**

## **©** Curriculum Aligned

- W Multiple curriculum standards supported
- **V** Age-appropriate for each grade level
- V Professional educational design

## **Pedagogical Design**

- **Progressive difficulty** within each topic
- $\bigcirc$  <u>Variety of question types</u> (computation  $\rightarrow$  application  $\rightarrow$  problem-solving)
- **Real-world contexts** (shopping, travel, science, cooking)
- II Self-assessment sections for student reflection

#### **Teacher Resources**

- Clear learning objectives for each worksheet
- **Marking schemes** with point allocations
- **Extension ideas** for differentiation

# Difficulty Level Guide

# **Easy Level**

- Introduction to new concepts
- Basic practice problems
- Step-by-step guidance
- Suitable for initial learning

### **Medium Level**

- Application of learned concepts
- Mixed problem types
- Real-world scenarios

• Standard curriculum level



- Advanced problem solving
- Multi-step challenges
- Extension activities
- Enrichment for advanced students

## Contributing

We welcome contributions to expand this educational resource!

## Mark Add New Content

- Create worksheets for missing grades/subjects
- Add difficulty variations
- Develop new topics

# Improve Existing Content

- Report issues or suggestions
- Enhance question quality
- Update curriculum alignment

# **Enhance Tools**

- Improve conversion scripts
- Add new output formats
- Create worksheet generators

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• <u>Issues</u>: Use GitHub Issues for bug reports

• **Suggestions**: Open discussions for new ideas

• **<u>Direct contact</u>**: For educational partnerships



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#### **©** Educational Use

- **V** Free for educational use in schools and homes
- **Modify and adapt** to suit your needs
- Share with colleagues and other educators
- **Commercial use allowed** with attribution

# **Future Plans**

# **Content Expansion**

- ☐ Complete Grade 1-12 Mathematics coverage
- ☐ Add Science worksheets (Physics, Chemistry, Biology)
- ☐ Include English Language Arts materials
- Develop other subject areas

# **X** Tool Enhancement

- ☐ Automated worksheet generators
- ☐ Interactive web versions

☐ Assessment and tracking tools
☐ Multi-language support
<b>Community Features</b>
☐ Teacher sharing platform
☐ Student progress tracking
☐ Curriculum mapping tools
☐ International standards alignment
La Current Stats
Grades Structured 1-12 Subjects Mathematics (Active) Worksheets 3 (Grade 7)
Difficulty Levels 3 (Easy, Medium, Hard)
Ready to transform education? Start exploring and contributing!

Created with **v** for educational excellence