

# Alabama ACAP Grade 7 Math Summer Review

*8-Week Core Review with Practice, Quizzes & Answers*

**Dr. A. Nazari**

Copyright © 2026 Dr. A. Nazari

Published by View Math Education  
ViewMath.com

All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of the author, except in the case of brief quotations embodied in critical reviews and certain other noncommercial uses permitted by copyright law, including Section 107 or 108 of the 1976 United States Copyright Act.

The information in this book is distributed on an “as is” basis, without warranty. While every precaution has been taken in the preparation of this work, neither the author nor the publisher shall have any liability to any person or entity with respect to any loss or damage caused or alleged to be caused directly or indirectly by the information contained in this book.

*Copyright © 2026*

# Grade 7 Summer Math Review

---

This 8-week plan reviews the Grade 7 math students already learned this year.

## How each week works

- Monday through Thursday are short review days.
- Each day starts with a focused Lesson Review.
- Each practice day has 6 problems.
- Friday is a 10-question quiz.
- Answers explain the thinking, not just the final number.

**Complete the practice first, then use the answer key to check your reasoning.**

# Your 8-Week Summer Review Plan

Use this book four days a week, then take the quiz on Friday.

## Weekly Schedule

Week	Monday	Tuesday	Wednesday	Thursday	Friday
1	Day 1	Day 2	Day 3	Day 4	Quiz 1
2	Day 5	Day 6	Day 7	Day 8	Quiz 2
3	Day 9	Day 10	Day 11	Day 12	Quiz 3
4	Day 13	Day 14	Day 15	Day 16	Quiz 4
5	Day 17	Day 18	Day 19	Day 20	Quiz 5
6	Day 21	Day 22	Day 23	Day 24	Quiz 6
7	Day 25	Day 26	Day 27	Day 28	Quiz 7
8	Day 29	Day 30	Mixed Review	Final Review	Final Quiz

### For students

Read the Lesson Review first. Try all 6 problems before checking answers. If you miss one, read the explanation and fix your work.

### For parents and teachers

The daily pages are meant to be short. If a student struggles, use the answer explanation as the teaching step, then have the student correct the problem.

### Goal

By the end of 8 weeks, students will have completed 192 daily practice problems and 80 quiz questions, with review across the full Grade 7 math year.



# ★ *Table of Contents* ★

*Your 8-week summer review plan*

★ <i>Week 1</i>	<i>Proportional Relationships and Percents</i> .....	<i>1</i>
★ <i>Week 6</i>	<i>Geometry and Measurement</i> .....	<i>5</i>
★	<i>Answer Key &amp; Explanations</i> .....	<i>7</i>



# WEEK

1

## *Proportional Relationships and Percents*

### *This Week's Days*

*Day 1: Unit Rates and Proportional Relationships . . . . . 2*

*Day 4: Percent Problems and Proportions . . . . . 3*

*Week 1 Quiz: Proportional Relationships and Percents . . . 4*



## Day 1 Unit Rates and Proportional Relationships

A **unit rate** tells how much there is for 1 unit, such as miles per hour or dollars per pound.

- To find a unit rate, divide: amount  $\div$  number of units.
- A complex fraction like  $\frac{\frac{3}{4}}{\frac{1}{6}}$  means  $\frac{3}{4} \div \frac{1}{6}$ .
- A relationship is **proportional** when every ratio  $\frac{y}{x}$  is the same.
- In a proportional relationship, the graph is a straight line through  $(0, 0)$ .
- The constant unit rate is the multiplier that connects  $x$  and  $y$ .

Always check both the numbers and the meaning of the units.

### Practice

1. Find the unit rate:  $\frac{\frac{3}{4} \text{ mile}}{\frac{1}{6} \text{ hour}}$ . \_\_\_\_\_
2. A recipe uses  $\frac{2}{5}$  cup of oil for  $\frac{1}{3}$  batch. How much oil is used for 1 batch?
3. Does the table show a proportional relationship?

$x$	2	4	6
$y$	9	18	27

4. Does the table show a proportional relationship?

$x$	1	3	5
$y$	4	10	16

5. A proportional graph passes through  $(0, 0)$  and  $(5, 15)$ . What is the unit rate and equation?
6. Six tickets cost \$16.50 at the same rate. How much do 10 tickets cost?



Get Online



Find more at  
[ViewMath.com/Grade7](https://www.viewmath.com/Grade7)



**Day 4** Percent Problems and Proportions

Percent means “per 100,” so every percent problem connects a part, a whole, and a percent.

- To find a part, multiply:  $\text{part} = \text{percent} \times \text{whole}$ .
- To find a whole, divide:  $\text{whole} = \text{part} \div \text{percent}$ .
- To find a percent, divide  $\frac{\text{part}}{\text{whole}}$  and convert to a percent.
- The proportion method is  $\frac{\text{part}}{\text{whole}} = \frac{p}{100}$ .
- Convert percents to decimals before multiplying, such as  $35\% = 0.35$ .



Ask what is missing first: the part, the whole, or the percent.

**Practice**

1. What is 35% of 240?
2. 45 is 60% of what number?
3. 18 is what percent of 72?
4. In a survey, 28 out of 80 students chose art club. What percent chose art club?
5. Solve with a proportion: what is 18% of 150?
6. A club has 125 members. If 24% volunteered at the food drive, how many members volunteered?



Get Online

Find more at  
[ViewMath.com/Grade7](https://www.viewmath.com/Grade7)

 Week 1 Quiz

## Proportional Relationships and Percents

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score: \_\_\_\_\_/10

1. Which unit rate is equal to  $\frac{\frac{2}{3} \text{ mile}}{\frac{1}{4} \text{ hour}}$ ?

A.  $\frac{1}{6}$  mphB.  $\frac{8}{3}$  mphC.  $\frac{3}{8}$  mph

D. 6 mph

2. Does the table show a proportional relationship?

$x$	2	6	9
$y$	10	30	45

3. Four pounds of peaches cost \$11. Write the proportional equation for total cost  $y$  and pounds  $x$ .

4. True or False: A straight line that crosses the  $y$ -axis at  $(0, 2)$  can represent a proportional relationship.

 True

 False

5. What is 30% of 180? \_\_\_\_\_

6. 42 is 70% of what number? \_\_\_\_\_

7. What percent of 150 is 24? \_\_\_\_\_

8. Store A sells 5 notebooks for \$12.50. Store B sells 8 notebooks for \$19.20. Which store has the lower unit price?

9. A proportional line contains the point  $(7, 28)$ . What point on the line has  $x = 1$ ?

10. Solve the proportion  $\frac{x}{80} = \frac{35}{100}$ .



Get Online


 Find more at  
[ViewMath.com/Grade7](https://www.viewmath.com/Grade7)


**ViewMath.com**

WEEK

6

*Geometry and Measurement*

 *This Week's Days* 

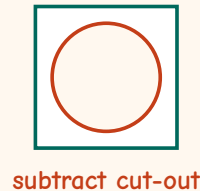
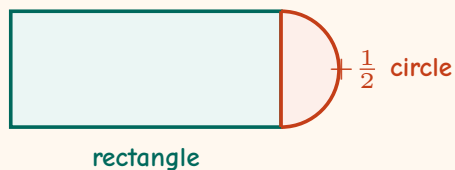
*Day 23: Area of Circles and Composite Shapes ..... 6*



## Day 23 Area of Circles and Composite Shapes

Circle area measures the space inside a circle.

- Use  $A = \pi r^2$  for the area of a circle.
- Always use the radius; if given diameter, divide by 2 first.
- A semicircle is half of a circle, so its area is  $\frac{1}{2}\pi r^2$ .
- Composite shapes are made from simpler shapes.
- Add areas for attached parts and subtract areas for cut-out parts.



Label square units because area measures two-dimensional space.

### Practice

1. Find the area of a circle with radius 5 cm. Use  $\pi \approx 3.14$ .
2. Find the area of a circle with diameter 18 m. Use  $\pi \approx 3.14$ .
3. Find the area of a semicircle with diameter 10 ft. Use  $\pi \approx 3.14$ .
4. A rectangle is 12 cm by 8 cm with a semicircle attached to the 8 cm side. Find the total area. Use  $\pi \approx 3.14$ .
5. A square has side length 10 in., and a circle with diameter 10 in. is cut out. Find the remaining area. Use  $\pi \approx 3.14$ .
6. A triangle has base 16 m and height 9 m. A semicircle with diameter 16 m is attached to the base. Find the total area. Use  $\pi \approx 3.14$ .



Get Online



Find more at  
[ViewMath.com/Grade7](https://www.viewmath.com/Grade7)



## Check Your Answers

Use each explanation to check the method, not just the final answer.

Day 1



### Unit Rates and Proportional Relationships

1  $\frac{9}{2}$  miles per hour, or 4.5 mph

2  $\frac{6}{5}$  cups, or  $1\frac{1}{5}$  cups

3 Yes

4 No

5 Unit rate = 3; equation  $y = 3x$

6 \$27.50

#### Explanations

1 A unit rate asks for the amount in 1 hour, so divide  $\frac{3}{4}$  by  $\frac{1}{6}$ . Multiplying by the reciprocal gives  $\frac{3}{4} \times 6 = \frac{18}{4} = \frac{9}{2}$ .

2 Divide the oil by the fraction of a batch:  $\frac{2}{5} \div \frac{1}{3} = \frac{2}{5} \times 3 = \frac{6}{5}$ . This means one whole batch uses  $1\frac{1}{5}$  cups.

3 Each ratio  $\frac{y}{x}$  equals 4.5:  $\frac{9}{2} = 4.5$ ,  $\frac{18}{4} = 4.5$ , and  $\frac{27}{6} = 4.5$ . Since the ratio stays the same, the relationship is proportional.

4 For a proportional relationship,  $\frac{y}{x}$  must be constant. Here  $\frac{4}{1} = 4$  but  $\frac{10}{3} \neq 4$ , so the ratios do not match.

5 Use the nonzero point to find  $k = \frac{y}{x} = \frac{15}{5} = 3$ . A proportional equation has the form  $y = kx$ , so the equation is  $y = 3x$ .

6 First find the unit rate:  $16.50 \div 6 = 2.75$  dollars per ticket. Then multiply by 10 tickets:  $2.75 \times 10 = \$27.50$ .



**Day 4**  **Percent Problems and Proportions**

1 84

2 75

3 25%

4 35%

5 27

6 30 members

 **Explanations**

1 Convert 35% to 0.35, then multiply by the whole.  $0.35 \times 240 = 84$ , so the part is 84.

2 Here 45 is the part and the whole is unknown. Divide by the percent as a decimal:  $45 \div 0.60 = 75$ .

3 Use  $\frac{\text{part}}{\text{whole}} = \frac{18}{72} = \frac{1}{4} = 0.25$ . Convert 0.25 to 25%.

4 Divide the part by the whole:  $\frac{28}{80} = 0.35$ . As a percent,  $0.35 = 35\%$ .

5 Set up  $\frac{x}{150} = \frac{18}{100}$ . Cross-multiplying gives  $100x = 2700$ , so  $x = 27$ .

6 Convert 24% to 0.24 and multiply by the total number of members.  $0.24 \times 125 = 30$ , so 30 members volunteered.

**Day Q1**  **Week 1 Quiz**

1 B

2 Yes

3  $y = 2.75x$ 

4 False

5 54

6 60

7 16%

8 Store B

9 (1, 4)

10  $x = 28$ 
 **Explanations**

1 Divide  $\frac{2}{3}$  by  $\frac{1}{4}$ , which means multiply by 4.  $\frac{2}{3} \times 4 = \frac{8}{3}$  miles per hour, so choice B is correct.

2 Each ratio  $\frac{y}{x}$  equals 5. Since the same multiplier connects every  $x$  to  $y$ , the relationship is proportional.

3 The unit price is  $11 \div 4 = \$2.75$  per pound. Total cost equals 2.75 times the number of pounds, so  $y = 2.75x$ .



Get Online


 Find more at  
[ViewMath.com/Grade7](https://www.viewmath.com/Grade7)


4 A proportional graph must pass through the origin  $(0, 0)$ . Crossing at  $(0, 2)$  means there is an output of 2 when the input is 0, so it is not proportional.

5 Convert 30% to 0.30 and multiply by the whole.  $0.30 \times 180 = 54$ .

6 The whole is unknown, so divide the part by the percent as a decimal.  $42 \div 0.70 = 60$ .

7 Use  $\frac{24}{150} = 0.16$ . Converting 0.16 to a percent gives 16%.

8 Store A costs  $12.50 \div 5 = \$2.50$  per notebook. Store B costs  $19.20 \div 8 = \$2.40$  per notebook, so Store B is lower.

9 The constant of proportionality is  $k = \frac{28}{7} = 4$ . The point where  $x = 1$  is  $(1, k)$ , so the point is  $(1, 4)$ .

10 The proportion represents 35% of 80. Cross-multiply to get  $100x = 2800$ , so  $x = 28$ .

### Day 23 Area of Circles and Composite Shapes

1  $78.5 \text{ cm}^2$

2  $254.34 \text{ m}^2$

3  $39.25 \text{ ft}^2$

4  $121.12 \text{ cm}^2$

5  $21.5 \text{ in}^2$

6  $172.48 \text{ m}^2$

#### Explanations

1 Use  $A = \pi r^2$ .  $A = 3.14 \times 5^2 = 3.14 \times 25 = 78.5 \text{ cm}^2$ .

2 The radius is half the diameter, so  $r = 9 \text{ m}$ . Then  $A = 3.14 \times 9^2 = 3.14 \times 81 = 254.34 \text{ m}^2$ .

3 The radius is 5 ft. A full circle has area  $3.14 \times 25 = 78.5$ , so the semicircle has half that area:  $39.25 \text{ ft}^2$ .

4 The rectangle area is  $12 \times 8 = 96$ . The semicircle has diameter 8, radius 4, and area  $\frac{1}{2}(3.14)(4^2) = 25.12$ , so the total is  $121.12 \text{ cm}^2$ .

5 The square area is  $10^2 = 100$ . The circle has radius 5, so its area is  $3.14 \times 25 = 78.5$ ; subtracting gives  $100 - 78.5 = 21.5$ .



Get Online



Find more at  
[ViewMath.com/Grade7](http://ViewMath.com/Grade7)



6 The triangle area is  $\frac{1}{2}(16)(9) = 72$ . The semicircle has radius 8 and area  $\frac{1}{2}(3.14)(64) = 100.48$ , giving total area  $172.48 \text{ m}^2$ .

PREVIEW



Get Online



Find more at  
[ViewMath.com/Grade7](https://www.viewmath.com/Grade7)



**ViewMath.com**



THANK YOU

## Enjoyed This Preview?

### Get the Full Book!

*This preview shows just a small sample of what's inside.*

*The complete book includes:*

- ✓ *All chapters and topics*
- ✓ *Hundreds of practice problems*
- ✓ *Complete answer key with explanations*
- ✓ *Colorful visuals and step-by-step examples*
- ✓ *Reference sheets and progress trackers*

🌐 Visit us at [ViewMath.com](https://www.viewmath.com) for free resources and more books!