

8

FULL-LENGTH

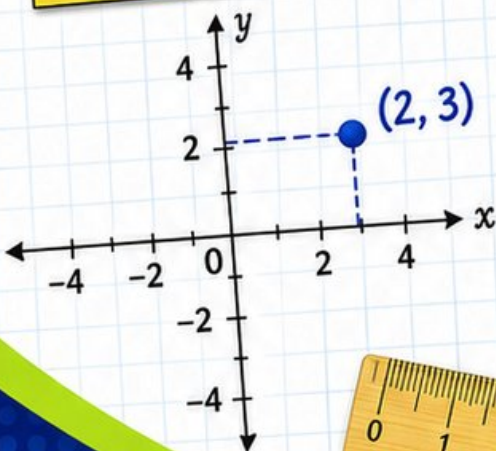
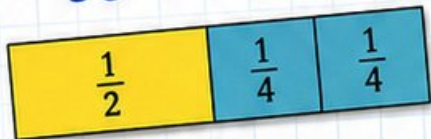
Vermont VTCAP

GRADE 5

MATH PRACTICE TESTS

Mixed Practice Questions with Answer Key
for Students, Parents, and Teachers

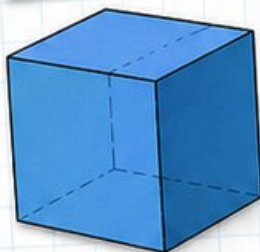
$$36 \div 4 = 9$$



$$2.4 \times 7 = 16.8$$

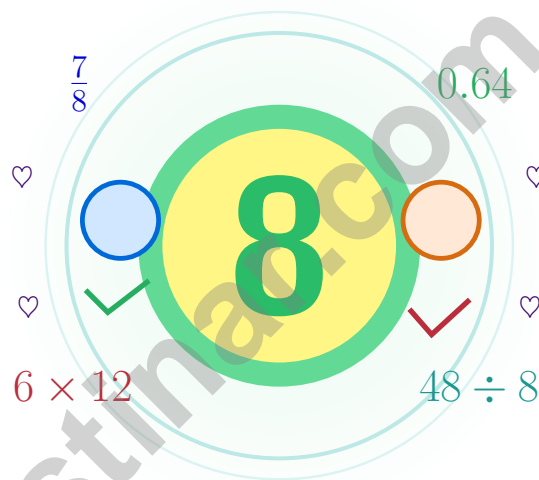
$$7 \times (12 - 5) = 49$$

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



8 Vermont VTCAP Grade 5 Math Practice Tests

Seven steps, seven growth checks, one calm routine



Eight full tests, a focused quick review, and helpful support that turns Grade 5 practice in The Green Mountain State into steady, confident growth from page one to the final check.

Jay Daie and Reza Nazari



Copyright ©

Testinar Inc



Published by Testinar Inc

Testinar.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.

This publication is independently produced and has no official connection to any state, district, or national testing program.

Test names and organizational names used herein are the property of their respective trademark holders.



Copyright ©

Vermont, Steady Practice Starts Here

Eight full tests, seven lessons, one stronger mathematician

To Every Math Brain in Vermont

This practice book is your steady companion for eight tests, not a place to be perfect. Math is like a Green Mountain trail – it climbs gently, rewards patience, and never asks you to sprint.

Use these eight tests like stepping-stones. Take one test at a time, check your answers honestly, and notice which skills need more attention. Small improvements add up across seven rounds.

See

See the question fully before you start the math.

Plan

Pick a strategy that fits the numbers in front of you.

Build

Build the answer step by step, no shortcuts.

A strong habit for Vermont mathematicians: read carefully, estimate when it helps, show your steps, and keep going even when a question feels tricky. That is how steady math confidence is built.

Testinar.com



Scan me



Use This Book Like a Trail Guide

A simple routine that turns practice into progress

Step 1: Set Up

Pencil ready, distractions gone.

Spend a few minutes waking up your memory before the test begins.

Step 2: Work the Test

Take a full test like the real day.

Work in a calm spot and focus on careful thinking before speed.

Step 3: Look Back

Walk through your answers without rushing.

Circle missed questions and notice which topics keep showing up.

Step 4: Climb Higher

Pick one or two skills to sharpen next.

Read the explanation, repair the work, and bring that lesson into the next test.



Table of Contents

★ Practice Test 1	_____	23
★ Practice Test 2	_____	37
★ Practice Test 3	_____	50
★ Practice Test 4	_____	65
★ Practice Test 5	_____	80
★ Practice Test 6	_____	95
★ Practice Test 7	_____	110
★ Practice Test 8	_____	126
Practice Test Answer Keys	_____	140
Practice Test Answers and Explanations	_____	145

Grade 5 Mathematics Reference Materials

PERIMETER AND AREA

Perimeter of Rectangle $P = 2l + 2w$ or $P = 2(l + w)$

Area of Rectangle $A = l \times w$

Area of Triangle $A = \frac{1}{2} \times b \times h$

Volume of Rectangular Prism $V = l \times w \times h$

LENGTH

Customary

1 foot (ft) = 12 inches (in.)

1 yard (yd) = 3 feet (ft)

1 yard (yd) = 36 inches (in.)

Metric

1 meter (m) = 100 centimeters (cm)

1 centimeter (cm) = 10 millimeters (mm)

1 kilometer (km) = 1,000 meters (m)

CAPACITY

Customary

1 cup (c) = 8 fluid ounces (fl oz)

1 pint (pt) = 2 cups (c)

1 quart (qt) = 2 pints (pt)

1 gallon (gal) = 4 quarts (qt)

Metric

1 liter (L) = 1,000 milliliters (mL)

WEIGHT AND MASS

Customary

1 pound (lb) = 16 ounces (oz)

Metric

1 kilogram (kg) = 1,000 grams (g)

1 gram (g) = 1,000 milligrams (mg)

TIME

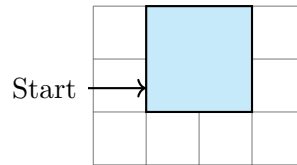
1 minute (min) = 60 seconds (sec) 1 week = 7 days

1 hour (hr) = 60 minutes (min) 1 year = 12 months

1 day = 24 hours (hr) 1 year = 52 weeks



- 4) A polygon is formed by connecting points on a grid. How many right angles does it have?



- A. 3 C. 5
 B. 4 D. 6
- 5) Which two decimals add to 5.00?
- A. $2.34 + 2.56$ C. $2.45 + 2.55$
 B. $3.12 + 1.78$ D. $1.99 + 3.02$
- 6) Complete the pattern shown in the table:

Power	Value
10^1	10
10^2	100
10^3	1000
10^4	?

- A. 10000 C. 40
 B. 100000 D. 4000
- 7) Find: $832 \div 16$.

Record your answer in the space provided.



Grade 5 Mathematics Reference Materials

PERIMETER AND AREA

Perimeter of Rectangle $P = 2l + 2w$ or $P = 2(l + w)$

Area of Rectangle $A = l \times w$

Area of Triangle $A = \frac{1}{2} \times b \times h$

Volume of Rectangular Prism $V = l \times w \times h$

LENGTH

Customary

1 foot (ft) = 12 inches (in.)

1 yard (yd) = 3 feet (ft)

1 yard (yd) = 36 inches (in.)

Metric

1 meter (m) = 100 centimeters (cm)

1 centimeter (cm) = 10 millimeters (mm)

1 kilometer (km) = 1,000 meters (m)

CAPACITY

Customary

1 cup (c) = 8 fluid ounces (fl oz)

1 pint (pt) = 2 cups (c)

1 quart (qt) = 2 pints (pt)

1 gallon (gal) = 4 quarts (qt)

Metric

1 liter (L) = 1,000 milliliters (mL)

WEIGHT AND MASS

Customary

1 pound (lb) = 16 ounces (oz)

Metric

1 kilogram (kg) = 1,000 grams (g)

1 gram (g) = 1,000 milligrams (mg)

TIME

1 minute (min) = 60 seconds (sec) 1 week = 7 days

1 hour (hr) = 60 minutes (min) 1 year = 12 months

1 day = 24 hours (hr) 1 year = 52 weeks



1) Which product has the same number of zeros as the product 60×500 ?

- A. 30×200
 C. 40×800
 B. 6×500
 D. $3,000 \times 10$

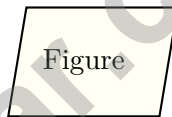
2) A point is 4 units to the right of the origin and above the x-axis. Which ordered pair could show the point?

- A. (4, 0)
 C. (4, 3)
 B. (3, 4)
 D. (0, 4)

3) What is $\frac{4}{9} \times \frac{3}{5}$ in simplest form?

- A. $\frac{13}{45}$
 C. $\frac{7}{14}$
 B. $\frac{4}{15}$
 D. $\frac{2}{3}$

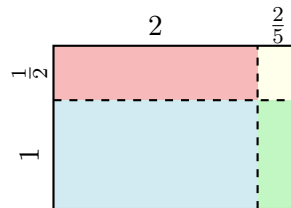
4)



This figure has both pairs of opposite sides parallel. Each pair of opposite sides is also equal in length. Which is the BEST name?

- A. Trapezoid
 C. Kite
 B. Parallelogram
 D. Quadrilateral only

5) A classroom tile floor is $2\frac{2}{5}$ meters long and $1\frac{1}{2}$ meters wide. What is the area?



- A. 4 square meters
 C. $3\frac{1}{5}$ square meters
 B. $2\frac{1}{2}$ square meters
 D. $3\frac{3}{5}$ square meters



Grade 5 Mathematics Reference Materials

PERIMETER AND AREA

Perimeter of Rectangle $P = 2l + 2w$ or $P = 2(l + w)$

Area of Rectangle $A = l \times w$

Area of Triangle $A = \frac{1}{2} \times b \times h$

Volume of Rectangular Prism $V = l \times w \times h$

LENGTH

Customary

1 foot (ft) = 12 inches (in.)

1 yard (yd) = 3 feet (ft)

1 yard (yd) = 36 inches (in.)

Metric

1 meter (m) = 100 centimeters (cm)

1 centimeter (cm) = 10 millimeters (mm)

1 kilometer (km) = 1,000 meters (m)

CAPACITY

Customary

1 cup (c) = 8 fluid ounces (fl oz)

1 pint (pt) = 2 cups (c)

1 quart (qt) = 2 pints (pt)

1 gallon (gal) = 4 quarts (qt)

Metric

1 liter (L) = 1,000 milliliters (mL)

WEIGHT AND MASS

Customary

1 pound (lb) = 16 ounces (oz)

Metric

1 kilogram (kg) = 1,000 grams (g)

1 gram (g) = 1,000 milligrams (mg)

TIME

1 minute (min) = 60 seconds (sec) 1 week = 7 days

1 hour (hr) = 60 minutes (min) 1 year = 12 months

1 day = 24 hours (hr) 1 year = 52 weeks

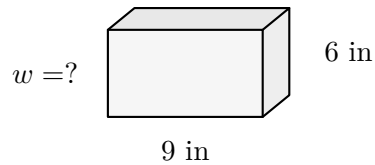


1) A clothing store has $\frac{4}{8}$ of its inventory on sale. What is this fraction in simplest form?

- A. $\frac{1}{8}$
 B. $\frac{2}{8}$

- C. $\frac{1}{2}$
 D. $\frac{3}{8}$

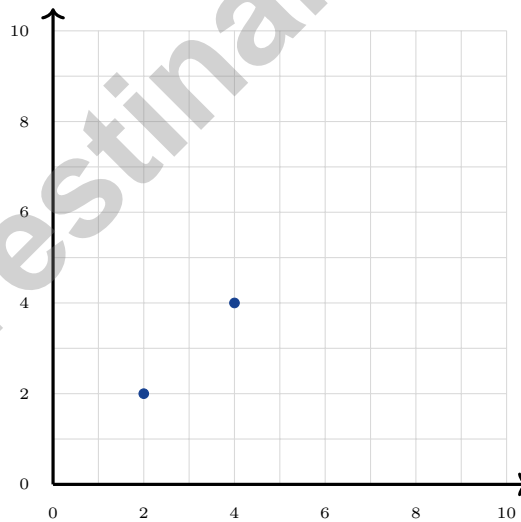
2) A rectangular prism has a length of 9 inches and a height of 6 inches. If the volume is 432 cubic inches, what is the width?



- A. 6 inches
 B. 8 inches

- C. 12 inches
 D. 14 inches

3) A pattern starts with (2, 2). Each subsequent point adds 2 to both coordinates. What is the fourth point?



- A. (10, 10)
 B. (4, 4)

- C. (6, 6)
 D. (8, 8)



Grade 5 Mathematics Reference Materials

PERIMETER AND AREA

Perimeter of Rectangle $P = 2l + 2w$ or $P = 2(l + w)$

Area of Rectangle $A = l \times w$

Area of Triangle $A = \frac{1}{2} \times b \times h$

Volume of Rectangular Prism $V = l \times w \times h$

LENGTH

Customary

1 foot (ft) = 12 inches (in.)

1 yard (yd) = 3 feet (ft)

1 yard (yd) = 36 inches (in.)

Metric

1 meter (m) = 100 centimeters (cm)

1 centimeter (cm) = 10 millimeters (mm)

1 kilometer (km) = 1,000 meters (m)

CAPACITY

Customary

1 cup (c) = 8 fluid ounces (fl oz)

1 pint (pt) = 2 cups (c)

1 quart (qt) = 2 pints (pt)

1 gallon (gal) = 4 quarts (qt)

Metric

1 liter (L) = 1,000 milliliters (mL)

WEIGHT AND MASS

Customary

1 pound (lb) = 16 ounces (oz)

Metric

1 kilogram (kg) = 1,000 grams (g)

1 gram (g) = 1,000 milligrams (mg)

TIME

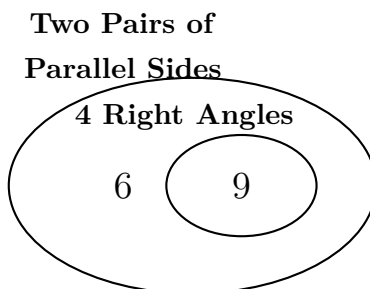
1 minute (min) = 60 seconds (sec) 1 week = 7 days

1 hour (hr) = 60 minutes (min) 1 year = 12 months

1 day = 24 hours (hr) 1 year = 52 weeks



- 1) A Venn diagram shows quadrilaterals with 4 right angles inside the group of quadrilaterals with two pairs of parallel sides:



Why is the smaller circle completely inside the larger circle?

- A. No quadrilateral can have four right angles.
- B. A rectangle is never a parallelogram.
- C. A square has only three sides.
- D. A quadrilateral with four right angles also has two pairs of parallel sides.
- 2) A water tank holds 250 liters. It currently has 165.5 liters. How many more liters are needed to fill the tank completely?
- A. 74.5 liters
- B. 94.5 liters
- C. 84.5 liters
- D. 104.5 liters
- 3) Evan calculates $9 \times \frac{2}{3}$ and gets 18. Is his answer reasonable?
- A. Yes, it is reasonable
- B. No, it is too large
- C. No, it is too small
- D. Cannot determine
- 4) Two boxes are compared. Box A is 8 feet by 4 feet by 3 feet. Box B is 7 feet by 5 feet by 3 feet. By how much is Box B's volume greater than Box A's volume?

Record your answer in the space provided.



Practice Test Answer Keys

How to use this section:

1. check your answer
2. circle missed questions
3. rework them before reading the explanation

Good correction habits build strong scores.

Testinar.com



Scan me

Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice A is correct.** (5.NF.A.2) Since 7 and 5 share no common factors other than 1, their LCM is $7 \times 5 = 35$.
- 2) **The correct answer is 5.99.** (5.NBT.A.4) Thousandths digit is 5, which rounds the hundredths up from 8 to 9: 5.99.
- 3) **Choice B is correct.** (5.NBT.A.4) Student B incorrectly multiplied both numerator and denominator by 7, undoing the product. The correct answer is $\frac{14}{9}$, which is the same as $1\frac{5}{9}$. Students A, C, and D show correct equivalent results.
- 4) **Choice B is correct.** (5.G.B.3) The polygon shown is a rectangle. It has 4 corners, and each corner is a right angle.
- 5) **Choice C is correct.** (5.NBT.B.7) C is correct because $2.45 + 2.55 = 5.00$. A and B each equal 4.90, and D equals 5.01.
- 6) **Choice A is correct.** (5.NBT.B.7) Each power of 10 adds one more zero: 10, 100, 1000, 10000.
- 7) **The correct answer is 52.** (5.NBT.B.6) $16 \times 50 = 800$, leaving 32. $32 \div 16 = 2$. So quotient is $50 + 2 = 52$.
- 8) **Choice D is correct.** (5.NBT.B.6) $8.4 \div 6 = 1.4$, which is between 1 and 2.
- 9) **Choice D is correct.** (5.OA.B.3) Each term is half the previous: $8 \div 2 = 4$.
- 10) **The correct answer is 450.** (5.OA.B.3) Move the decimal point three places right: $0.45 \rightarrow 450$.
- 11) **Choice B is correct.** (5.NBT.A.2) Total grams: $30 \times 10 = 300$ g. Convert: $300 \div 1000 = 0.3$ kg.
- 12) **Choice D is correct.** (5.NF.B.7c) $7 \div \frac{1}{4} = 7 \times 4 = 28$ pieces.
- 13) **Choice B is correct.** (5.NF.A.1) Add whole parts: $1 + 2 = 3$. Add fractions: $\frac{2}{5} + \frac{1}{5} = \frac{3}{5}$. Result: $3\frac{3}{5}$.
- 14) **Choice A is correct.** (5.NBT.B.7) $24.63 - 18.97 = 5.66$. Requires borrowing from both ones and tens places.
- 15) **Choice C is correct.** (5.NBT.B.7) Four pieces means $4 \times \frac{5}{8} = \frac{20}{8} = 2\frac{4}{8} = 2\frac{1}{2}$ yards.
- 16) **Choice D is correct.** (5.NF.B.7c) Start with one unit fraction, $\frac{1}{6}$, and share it into 5 equal parts. Each part is $\frac{1}{6} \div 5 = \frac{1}{30}$ of the whole.
- 17) **Choice D is correct.** (5.G.A.2) With input 0, the multiplication part is $4 \times 0 = 0$, and $0 + 2 = 2$. The pair is (0, 2).
- 18) **Choice B is correct.** (5.G.A.2) Divide the total by the number of vials: $3,600 \div 1,000 = 3.6$ mL per vial.
- 19) **Choice B is correct.** (5.MD.A.1) First find the total weight used: $8.5 + 4.25 = 12.75$ kg. Compare with the limit: $12.75 - 12 = 0.75$ kg, so they go 0.75 kg over.
- 20) **Choice D is correct.** (5.NBT.A.2) $27 \times 100 = 2700$. Append two zeros to 27.
- 21) **Choice B is correct.** (5.NBT.A.2) Volume = $8 \times 6 \times 5 = 48 \times 5 = 240$ ft³.
- 22) **Choices A, B are correct.** (5.MD.C.5a) Multiply the base area by the height: $15 \cdot 4 = 60$, so the volume is 60 cubic centimeters. C adds instead of multiplying, and D is false because the prism's volume stays the same no matter which face you call the base.
- 23) **Choice D is correct.** (5.OA.A.1) Solve the two inner groups first: $2 + 3 = 5$ and $6 \div 2 = 3$. The bracket becomes $5 + 3 = 8$, and $5 \times 8 = 40$.
- 24) **Choice A is correct.** (5.OA.A.1) 0.6 (6 tenths) > 0.06 (6 hundredths). A rise of 0.6 degrees is 10 times larger.
- 25) **Choice B is correct.** (5.NBT.B.5) Multiply: $26 \times 7 = (20 \times 7) + (6 \times 7) = 140 + 42 = 182$ salads.
- 26) **Choice C is correct.** (5.NBT.B.5) A triangle is a polygon, but it has 3 sides rather than 4 sides.
- 27) **Choice D is correct.** (5.NF.A.1) $9\frac{7}{8} - 4\frac{3}{8} = 5\frac{4}{8} = 5\frac{1}{2}$ ft.
- 28) **Choice D is correct.** (5.OA.A.2) The expression $(18 \times 5) + 3$ is the value of 18×5 with 3 added. So it is 3 more than 18×5 .
- 29) **Choice A is correct.** (5.MD.C.5c) Work one prism at a time: $5 \times 3 \times 2 = 30$, $3 \times 3 \times 4 = 36$, and $2 \times 2 \times 2 = 8$. Add the non-overlapping volumes: $30 + 36 + 8 = 74$ cubic inches.
- 30) **Choice A is correct.** (5.MD.C.4) $5 \times 1 \times 2 = 10$ unit cubes fit inside the container.
- 31) **Choice C is correct.** (5.NF.B.4b) Sugar for cake = $\frac{1}{2} \times \frac{3}{4} = \frac{3}{8}$ of the 5-pound bag. Since $\frac{3}{8} \times 5 = \frac{15}{8} = 1\frac{7}{8}$, she used $1\frac{7}{8}$ pounds.
- 32) **Choice C is correct.** (5.NF.B.5a) From the table: $\frac{1}{3} < 1$ gives $4 < 12$ (shrinks), 1 gives $12 = 12$ (unchanged), and $\frac{5}{4} > 1$ gives $15 > 12$ (grows).



Workshop Notes for an Inventor

Dear Math Inventor,

◇ 8 practice tests. 8 chances to invent new ways of thinking. You tried strategies, broke them, fixed them, and built them stronger. That's what inventors do. That's what you do. ◇

★ **What inventors know:** the first idea isn't always the best one. Sometimes you have to try, fail, learn, and try again. You've practiced that exact loop on every test. That practice is why your problem-solving brain is so flexible now. ★

Inventor's Workshop Inventory

- **Sketch Pad:** FULL of ideas! You can imagine multiple ways to solve.
- **Toolbox:** STOCKED! You have many strategies to draw on.
- **Workbench:** ORGANIZED! Your work is clear and step-by-step.
- **Invention Mindset:** STRONG! You're not afraid to try something new.

Inventor's tip: on test day, if your first idea doesn't work, switch tools. Try a different strategy. Inventors don't get stuck on one tool—they pick the right one for the job. Same on a math test.

If you want to share a proud moment or ask a question, please email me at jay@testinar.com. I'd love to hear from you!

Jay Daie

Your Math Inventor (Build Big Things)

$45 \div 5 = ?$

PRACTICE TODAY.

$\frac{3}{5} + \frac{1}{10} = ?$



ACHIEVE TOMORROW!



$3^2 + 4^2 = 25$

This book includes **8** full-length **Grade 5** math practice tests to help students master essential skills, build confidence, and achieve success. Each test is carefully designed to reflect real math standards and cover a variety of question types with detailed answer explanations.

$7x - 4 = 17$

$1\frac{1}{2} + 2\frac{1}{3} = ?$

8 FULL-LENGTH MATH PRACTICE TESTS



REALISTIC PRACTICE

Tests mirror Grade 5 math standards and real assessment formats.



ANSWER KEY INCLUDED

Detailed answer explanations help students understand and learn.



BUILD CONFIDENCE & SKILLS

Strengthens problem-solving abilities and reinforces key math concepts.



IMPROVE & TRACK PROGRESS

Identify strengths and focus on areas that need improvement.



ACHIEVE SUCCESS

Boosts test readiness and helps students achieve their best results.

COVERS ALL KEY GRADE 5 MATH TOPICS

- ✓ Whole Numbers & Operations
- ✓ Fractions & Decimals
- ✓ Algebraic Thinking
- ✓ Geometry
- ✓ Measurement & Data
- ✓ Number Patterns
- ✓ Word Problems
- ✓ Ratio & Proportion
- ✓ Perimeter, Area & Volume
- ✓ Graphing & Data Analysis

...and More!



VISIT testinar.com/math5

for more Grade 5 math resources and practice materials!



TRUSTED BY PARENTS



CREATED BY EDUCATORS



ALIGNED TO STANDARDS

Great for Students, Parents, and Teachers!

Practice with purpose. Succeed with confidence!