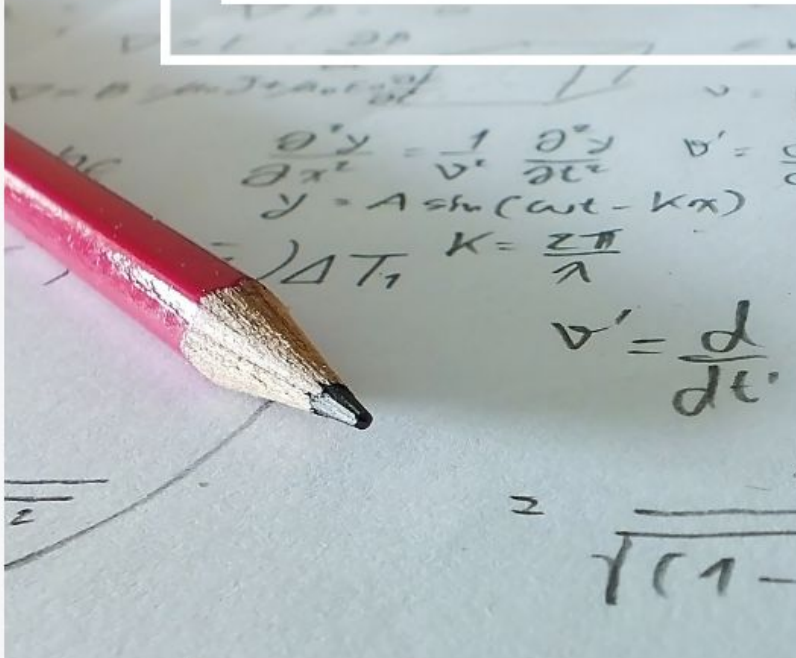# Magoosh

GRE MATH

Practice Questions & Explanations

WHAT'S INCLUDED:

Practice questions for all 5 question types

An answer key to check your work

Video explanations of each answer

Table of Contents

Introduction

GRE math questions cover a wide range of topics including arithmetic, algebra, geometry, and data interpretation. With so many areas to study, practice is the key to mastering the GRE math section.

Don't worry—Magoosh is here to help! The GRE math practice questions in this post will help you identify which areas you need to work on and how well you're prepared for the exam. Keep going for an in-depth look at 15 easy, medium, and hard GRE math questions with answers and explanations.

GRE Math Practice Questions

For each of the five question types you'll see in the GRE Quant section, we've included easy, medium, and hard questions for you to try. For every question in our product, Magoosh tracks how students perform on it so we can make sure each question is perfectly calibrated to mirror the real GRE!

Here's how we categorize them:

- Magoosh students (who are already determined to do well and have usually put in some study time!) answer "easy" questions correctly about 70% of the time.
- They answer "medium" questions right about 60% of the time, and "hard" questions right about 50% of the time.

GRE Quantitative Comparison Questions

Quantitative Comparison questions (also referred to as Quantitative Reasoning questions) don't ask you to solve problems. Instead, they ask you to compare two quantities. On the official GRE, these could be equations, variables, angle measurements, or other quantities. Then, you choose the answer that best describes how they are related.

Question 1 - Difficulty: Easy

The revenue generated by Company X is divided between Doug and Moira in a 6 to 5 ratio respectively.

Column A	Column B
Moira's share when the revenue generated by Company X is $15,700	$7,900

- **A.** The quantity in Column A is greater
- **B.** The quantity in Column B is greater
- **C.** The two quantities are equal
- **D.** The relationship cannot be determined from the information given

[Check the answer here!](#)

Question 2 - Difficulty: Medium
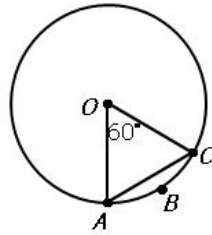
O is the center of the circle with radius 6.

Column A	Column B
Length of arc *ABC*	6

A. The quantity in Column A is greater

B. The quantity in Column B is greater

C. The two quantities are equal

D. The relationship cannot be determined from the information given

Check the answer here!

Question 3 - Difficulty: Hard

- The greatest prime factor of 144 is *x*
- The greatest prime factor of 96 is *y*

Column A	Column B
x	*y*

A. The quantity in Column A is greater

B. The quantity in Column B is greater

C. The two quantities are equal

D. The relationship cannot be determined from the information given

Check the answer here!

GRE Multiple-Choice Questions

For GRE multiple-choice questions, solve the problem on-screen and select the answer (one of five) that best answers it.

Question 4 - Difficulty: Easy

The price of a pair of sneakers was $80 for the last six months of last year. On January first, the price increased 20%. After the price increase, an employee bought these sneakers with a 10% employee discount. What price did the employee pay?

 A. $70.40
 B. $82.00
 C. $83.33
 D. $86.40
 E. $88.00

Check the answer here!

Question 5 - Difficulty: Medium

If $6k^2 + k = 2$ and $k > 0$, then k must equal which of the following?

A. $\frac{1}{2}$

B. 1

C. $\frac{3}{2}$

D. 2

E. 3

Check the answer here!

Question 6 - Difficulty: Hard

In how many different ways can 3 identical green shirts and 3 identical red shirts be distributed among 6 children such that each child receives a shirt?

  A. 20

  B. 40

  C. 216

  D. 720

  E. 729

[Check the answer here!](#)

GRE Numeric Entry Questions

On GRE Numeric Entry questions, you solve a given problem by typing your answer into a box provided on-screen.

Question 7 - Difficulty: Easy

Dharik lives in a house on a straight street. For years, there have been 16 houses on his street to the right of his house and 17 houses on his street to the left of his house. Last year, 5 new houses were built on the same street even further to the left of those houses to the left of Dharik's house. If these are the only houses on this street, how many houses are on this street?
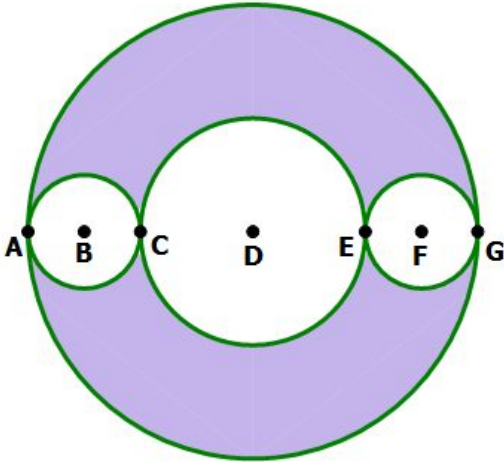
[ ]

Check the answer here!

Question 8 - Difficulty: Medium

If $\left(\dfrac{2^{-n}}{3} \right) \left(\dfrac{3^{-n}}{2} \right) = \dfrac{1}{36}$, what is the value of n?

[ ]

Check the answer here!

In the diagram, point *D* is the center of the medium-sized circle that passes through *C* and *E*, and it is also the center of the largest circle that passes through *A* and *G*. Each of the diameters of the small circles with centers *B* and *F* equals the radius of the medium-sized circle with center *D*. The shaded area is what fraction of the largest circle?

GRE Multiple-Answer Questions

If you encounter a question on GRE quantitative that appears to be multiple choice but does *not* specify that there is only one correct answer, you have found a multiple-answer question! Select **all** correct answer choices for this question type.

Question 10 - Difficulty: Easy

In a population of chickens, the average (arithmetic mean) weight is 6.3 pounds, and the standard deviation is 1.2 pounds. Which of the following weights (in pounds) are within 1.5 units of standard deviation of the mean?

Indicate <u>all</u> weights.

❏ 4.4

❏ 4.6

❏ 5.1

❏ 5.2

❏ 6.9

❏ 7.6

❏ 7.7

❏ 8.2

[Check the answer here!](#)

Question 11 - Difficulty: Medium

If $x > 0$ which of the following expressions are equal to 3.6% of $\frac{5x}{12}$?

Indicate <u>all</u> such expressions.

❏ 3 percent of $20x$

❏ x percent of $\frac{3}{2}$

- ❏ 3*x* percent of 0.2
- ❏ 0.05 percent of 3*x*
- ❏ $\frac{3x}{200}$

Question 12 - Difficulty: Hard

A popular website requires users to create a password consisting of digits only. If no digit may be repeated and each password must be at least 9 digits long, how many passwords are possible?

- ❏ 9! + 10!
- ❏ 2 × 10!
- ❏ 9! × 10!
- ❏ 19!
- ❏ 20!

GRE Data Interpretation Questions

GRE Data Interpretation questions are similar to multiple choice questions, with a twist: they ask you to look at graphics (primarily charts, graphs, and tables) and solve questions based on those.

Question 13 - Difficulty: Easy

ANIMAL DISTRIBUTION AT THE ZOO	
Animal	**Percent**
Lions	32%
Leopards	16%
Ocelots	20%
Tigers	8%
Bobcats	24%

If there are 44 leopards at the zoo, what is the zoo's total animal population?

- **A.** 225
- **B.** 275
- **C.** 325
- **D.** 350
- **E.** 375

Check the answer here!

Question 14 - Difficulty: Medium
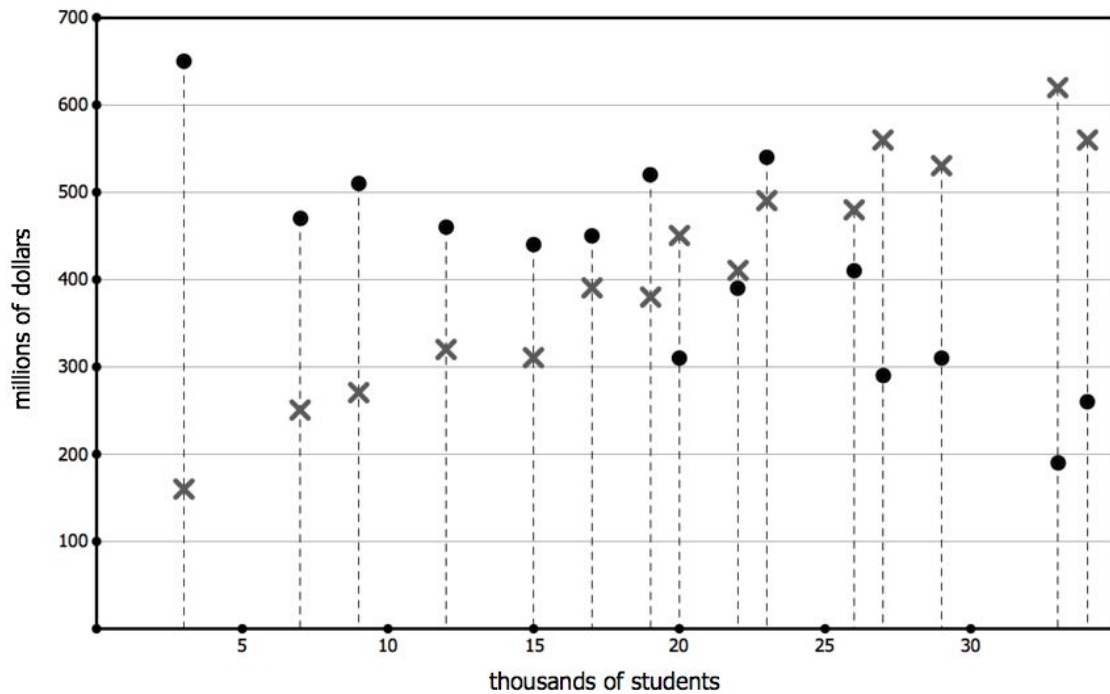
In the diagram above, each of fifteen private colleges is represented by a dot and an X on a vertical line. The X indicates the college's annual income from **tuition** in 2008. The dot, above or below on the same dashed vertical line, indicates the college's annual income in 2008 from **investments** such as endowments. The base of the vertical dashed line indicates the number of students at that college in 2008.

For how many colleges shown is the investment income in 2008 more than double the same college's tuition income in 2008?

- **A.** none
- **B.** one
- **C.** two
- **D.** three
- **E.** four

[Check the answer here!](#)

Question 15 - Difficulty: Hard

The following chart shows the population of Jenkinsville and the number of televisions in the town through the middle of part of the 20th century.

Year	Population	Number of TVs
1935	680	16
1940	750	20
1945	840	30
1950	960	50
1955	1200	80
1960	1500	150

The ratio of people to televisions in Jenkinsville decreased by approximately what percent from 1955 to 1960?

Give your answer to the nearest integer percent and do not enter the percent sign.

Check the answer here!

Answer Key and Explanations

GRE Quantitative Comparison Explanations

Question 1

Answer: B. The quantity in Column B is greater

Watch the video explanation here!

Question 2

Answer: A. The quantity in Column A is greater

Watch the video explanation here!

Question 3

Answer: C. The two quantities are equal

Watch the video explanation here!

GRE Multiple-Choice Explanations

Question 4

Answer: D. $86.40

Watch the video explanation here!

Question 5

Answer: A. $\frac{1}{2}$

Watch the video explanation here!

Question 6

Answer: A. 20

Watch the video explanation here!

GRE Numeric Entry Explanations

Question 7

Answer: 39

[Watch the video explanation here!](#)

Question 8

Answer: 1

[Watch the video explanation here!](#)

Question 9

Answer: $\frac{5}{8}$

[Watch the video explanation here!](#)

GRE Multiple-Answer Explanations

Question 10

Answers: 4.6, 5.1, 5.2, 6.9, 7.6, 7.7

[Watch the video explanation here!](#)

Question 11

Answers: x percent of $\frac{3}{2}$, $\frac{3x}{200}$

[Watch the video explanation here!](#)

Question 12

Answer: $2 \times 10!$

[Watch the video explanation here!](#)

GRE Data Interpretation Explanations

Question 13

Answer: B. 275

[Watch the video explanation here!](#)

Question 14

Answer: B. one

[Watch the video explanation here!](#)

Question 15

Answer: 33

[Watch the video explanation here!](#)