FSA Grade 6 Math Prep 2020

A Comprehensive Review and Step-By-Step Guide to Preparing for the FSA Math Test

Reza Nazari & Ava Ross

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By

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Description

FSA Grade 6Math Prep 2020, which reflects the 2020 FSA grade 6 test guidelines, provides students with the confidence and math skills they need to ace the FSA Math test. This comprehensive Prep book with hundreds of examples, over 2,000 sample questions, and two full length FSA Grade 6 Math tests is all you will ever need to fully prepare for the FSA Math. It will help you hone your math skills, overcome your exam anxiety, and boost your confidence -- and do your best to succeed on the FSA Math Test.

Whether you are intimidated by math, or even if you were the first to raise your hand in the Math classes, this book can help you incorporate the most effective method and the right strategies to prepare for the FSA Grade 6 Math test successfully. ***FSA Grade 6 Math Prep 2020*** is a breakthrough in Math learning — offering a winning formula and the most powerful methods for learning basic Math topics confidently.

The surest way to succeed on FSA Math Test is with intensive practice in every math topic tested--and that's what you will get in ***FSA Grade 6 Math Prep 2020***. Each chapter of this focused format has a comprehensive review created by Test Prep experts that goes into detail to cover all of the content likely to appear on the FSA Grade 6 Math test. Not only does this all-inclusive workbook offer everything you will ever need to conquer FSA Math test, it also contains two full-length and realistic FSA Grade 6 Math tests that reflect the format and question types on the FSA to help you check your exam-readiness and identify where you need more practice.

Inside the pages of this comprehensive prep book, students can learn math topics in a structured manner with a complete study program to help them understand essential math skills. It also has many exciting features, including:

- Content 100% aligned with the 2020 FSA test
- Written by FSA Math tutors and test experts
- Complete coverage of all FSA Grade 6 Math concepts and topics which you will be tested
- Step-by-step guide for all FSA Grade 6 Math topics
- Over 2,000 additional FSA math practice questions in both multiple-choice and grid-in formats with answers grouped by topic, so you can focus on your weak areas
- Abundant Math skill building exercises to help test-takers approach different question types that might be unfamiliar to them
- 2 full-length practice tests (featuring new question types) with detailed answers

FSA Grade 6 Math Prep 2020 is the only book you'll ever need to master Basic Math topics! It can be used as a self–study course – you do not need to work with a Math tutor. (It can also be used with a Math tutor)

Ideal for self-study as well as for classroom usage.

Create a Proportion

Step-by-step guide:

- ✓ A proportion contains two equal fractions! A proportion simply means that two fractions are equal.
- ✓ To create a proportion, simply find (or create) two equal fractions.

Examples:

1) Express ratios as a Proportion.
180 miles on 9 gallons of gas, how many miles on 1 gallon of gas?

First create a fraction: $\frac{180\ miles}{9\ gallon}$, and divide: $180 \div 9 = 20$

Then: 20 miles per gallon

2) State if this pair of ratios form a proportion. $\frac{2}{3} and \frac{12}{30}$

Use cross multiplication: $\frac{2}{3} = \frac{12}{30} \rightarrow 2 \times 30 = 12 \times 3 \rightarrow 60 = 36$, which is not correct.
Therefore, this pair of ratios doesn't form a proportion.

State if each pair of ratios form a proportion.

1) $\frac{2}{10} and \frac{4}{20}$

2) $\frac{1}{2} and \frac{15}{25}$

3) $\frac{4}{9} and \frac{40}{81}$

4) $\frac{6}{11} and \frac{42}{77}$

5) $\frac{1}{6} and \frac{8}{48}$

6) $\frac{5}{6} and \frac{35}{42}$

7) $\frac{3}{7} and \frac{27}{72}$

8) $\frac{2}{5} and \frac{16}{45}$

9) $\frac{6}{17} and \frac{36}{85}$

10) $\frac{2}{7} and \frac{24}{86}$

11) $\frac{13}{21} and \frac{182}{294}$

12) $\frac{12}{19} and \frac{156}{247}$

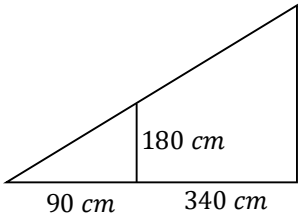
Similarity and Ratios

Step-by-step guide:

- ✓ Two or more figures are similar if the corresponding angles are equal, and the corresponding sides are in proportion.

Examples:

1) A girl $180\ cm$ tall, stands $340\ cm$ from a lamp post at night. Her shadow from the light is $80\ cm$ long. How high is the lamp post?



Write the proportion and solve for missing side.

$$\frac{\text{Smaller triangle height}}{\text{Smaller triangle base}} = \frac{\text{Bigger triangle height}}{\text{Bigger triangle base}}$$

$$\Rightarrow \frac{80cm}{180\text{cm}} = \frac{80+340\text{cm}}{x} \Rightarrow 80x = 180 \times 420 \Rightarrow x = 945\ cm$$

2) A tree $20\ feet$ tall casts a shadow $14\ feet$ long. Jack is $10\ feet$ tall. How long is Jack's shadow?

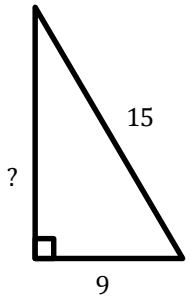
Write a proportion and solve for the missing number.

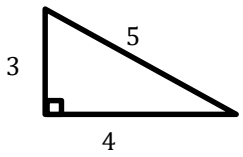
$$\frac{20}{14} = \frac{10}{x} \rightarrow 20x = 10 \times 14$$

$$20x = 140 \rightarrow x = \frac{140}{20} = 7$$

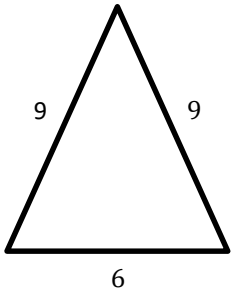
Each pair of figures is similar. Find the missing side.

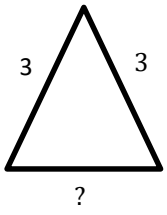
1)



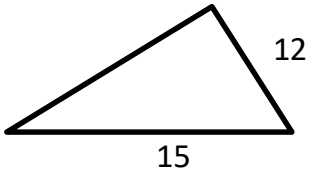


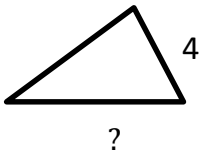
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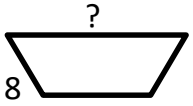


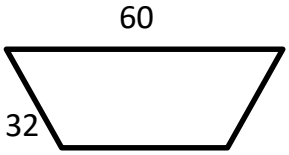
3)





4)





Simple Interest

Step-by-step guide:

- ✓ Simple Interest: The charge for borrowing money or the return for lending it.
  To solve a simple interest problem, use this formula:
  Interest = principal x rate x time ⇒ $\boldsymbol{I = p \times r \times t}$

Examples:

1) Find simple interest for $\$450$ investment at 7% for 8 years.

   Use Interest formula: $I = prt$

   $P = \$450$, $\mathrm{r} = 7\% = \frac{7}{100} = 0.07$ and $t = 8$

   Then: $I = 450 \times 0.07 \times 8 = \$252$

2) Find simple interest for $\$5{,}200$ at 4% for 3 years.

   Use Interest formula: $I = prt$

   $P = \$5{,}200$, $\mathrm{r} = 4\% = \frac{4}{100} = 0.04$ and $t = 3$

   Then: $I = 5{,}200 \times 0.04 \times 3 = \$624$

Determine the simple interest for these loans.

1) $\$840$ at 6% for 4 years. $ _____
2) $\$2{,}500$ at 2% for 8 years. $ _____
3) $\$1{,}200$ at 4% for 5 years. $ _____
4) $\$4{,}000$ at 1.5% for 3 years. $ _____
5) $\$5{,}300$ at 3% for 2 years. $ _____
6) $\$1{,}200$ at 5.5% for 4 years. $ _____
7) $\$1{,}800$ at 5% for 6 months. $ _____
8) $\$20{,}000$ at 2.5% for 7 years. $ _____

Answers – Chapter 6

Simplifying Ratios

1) 1: 2
2) 1: 2
3) 1: 3
4) 4: 3
5) 3: 7
6) 1: 5
7) 8: 9
8) 3: 4
9) 3: 10
10) 7: 9
11) 5: 9
12) 2: 1

Proportional Ratios

1) 16
2) 12
3) 18
4) 5
5) 6
6) 72
7) 16
8) 36
9) 12
10) 70
11) 20
12) 96

Create a Proportion

1) Yes
2) No
3) No
4) Yes
5) Yes
6) Yes
7) Yes
8) *No*
9) No
10) No
11) Yes
12) Yes

Similarity and ratios

1) 12
2) 2
3) 5
4) 15

Simple Interest

1) $201.60
2) $400
3) $240
4) $180
5) $318
6) $264
7) $45
8) $3,500

Chapter 7: Percentage

Math Topics that you'll learn in this chapter:

- ✓ Percentage Calculations
- ✓ Percent Problems
- ✓ Percent of Increase and Decrease
- ✓ Discount, Tax and Tip

Percentage Calculations

Step-by-step guide:

- ✓ Percent is a ratio of a number and 100. It always has the same denominator, 100. Percent symbol is %.
- ✓ Percent is another way to write decimals or fractions. For example:

$$40\% = 0.40 = \frac{40}{100} = \frac{2}{5}$$

- ✓ Use the following formula to find part, whole, or percent:

$$\text{part} = \frac{\text{percent}}{100} \times \text{whole}$$

Examples:

1) What is 15% of 50? Use the following formula: $\text{part} = \frac{\text{percent}}{100} \times \text{whole}$

$$\text{part} = \frac{15}{100} \times 50 \rightarrow \text{part} = \frac{15 \times 50}{100} \rightarrow \text{part} = \frac{75}{10} \rightarrow \text{part} = 7.5$$

2) What is 30% of 35? Use the percent formula: $part = \frac{percent}{100} \times whole$

$$\text{part} = \frac{30}{100} \times 35 \rightarrow \text{part} = \frac{105}{10} \rightarrow \text{part} = 10.5$$

Calculate the given percent of each value.

1) 10% of $100 =$ ____
2) 50% of $40 =$ ____
3) 20% of $50 =$ ____
4) 30% of $70 =$ ____
5) 45% of $20 =$ ____
6) 50% of $80 =$ ____
7) 30% of $100 =$ ____
8) 15% of $60 =$ ____
9) 40% of $90 =$ ____
10) 29% of $86 =$ ____
11) 33% of $54 =$ ____
12) 71% of $112 =$ ____