MSTAR PRACTICE WORKSHEET

Lesson 4-2: Relate Fractions, Decimals, and Percentages

Grade 6 Mathematics · Standard 6.AT.4

Name: _____ Date: _____

These are MSTAR-style questions written for this curriculum to rehearse the format. They are not official Maryland assessment items. MSTAR — Maryland's new state test, first given in spring 2027 — uses the same kinds of questions you see here: selected response, select-all, two-part evidence questions, and written responses.

Part A — Skills Check

Warm up with the lesson's core skills — one best answer each.

Question 1 SELECTED RESPONSE · 1 POINT

Convert 3/5 to a percent.

(A) 35%

(B) 53%

(C) 60%

(D) 65%

Question 2 SELECTED RESPONSE · 1 POINT

Convert 7/20 to a percent.

(A) 14%

(B) 20%

(C) 35%

(D) 70%

Question 3 SELECTED RESPONSE · 1 POINT

Which decimal is equivalent to 45%?

(A) 0.045

(B) 0.45

(C) 4.5

(D) 45.0

Question 4 SELECTED RESPONSE · 1 POINT

What fraction is equal to 0.75?

A 3/4

B 3/5

C 7/5

D 7/10

Question 5 SELECTED RESPONSE · 1 POINT

A game shows your score as 7/8 complete. What percent is that?

A 75%

B 78%

C 87.5%

D 88%

Question 6 SELECTED RESPONSE · 1 POINT

Your arcade scoreboard reads 0.25 of the level cleared. What percent and fraction match this score?

A 2.5% and 1/4

B 25% and 1/4

C 25% and 1/5

D 250% and 1/40

Part B — Test-Format Questions

These match the state test's formats: two-part questions, select-all, and written responses.

Question 7 TWO-PART QUESTION

Part A

What is the fraction 7/20 written as a decimal and as a percent?

Fill in the bubble next to the one best answer.

(A) 0.035 and 3.5%

(B) 0.35 and 35%

(C) 0.35 and 3.5%

(D) 0.7 and 70%

Part B

Answer Part A before Part B — Part B asks about your reasoning.

Which mathematical reasoning justifies the conversion in Part A?

(A) Multiplying both numerator and denominator by 5 yields the equivalent fraction 35/100, which equals 0.35 and 35%.

(B) Moving the decimal point in 7.20 one place left gives 0.72.

(C) Adding 15 to both terms gives 22/35, which equals 35%.

(D) Dividing 20 by 7 gives approximately 2.85, so the percent is 35%.

Question 8 WRITTEN RESPONSE · 2 POINTS

Type II Reasoning: Spot the Decimal-Percent Error

> Elena wrote that 0.08 is equal to 80% because 'there is an 8 in the number.'

Explain Elena's misconception and determine the correct percent value.

Write your answer in complete sentences. Show or explain your mathematical thinking.

Part C — Show Your Thinking

Answer in writing, the way the state test's constructed responses work.

Question 9 WRITTEN RESPONSE · 2 POINTS

A student says 3/8 is greater than 40% because 3 and 8 are bigger numbers than 4 and 0. Is the student correct? Convert both values to the same form and explain.

Write your answer in complete sentences. Show or explain your mathematical thinking.

When you finish, check your reasoning with your teacher or family. Your teacher has the scoring guide for the written responses.