

Math 7 Final Exam Study Guide

PART 1: PROBLEM SOLVING

Use the 5 steps to solve each problem

Janet orders dinner at a restaurant. Her meal costs \$29.99 plus \$1.50 in tax. Her drink was \$2.69 plus \$0.14 in tax. If she has \$45, does she have enough money for a \$3.00 desert?

Bananas cost \$0.49 per pound. Apples are \$.089 per pound. QAS buys 30 pounds of bananas and 50 pounds of apples each week. How much does ASA spend on apples and bananas each week?

PART 2: ESTIMATION

$$3,944 + 7,321$$

$$52,037 - 39,742$$

$$841 \times 309$$

$$\sqrt{59}$$

$$\sqrt{128}$$

$$\sqrt{399}$$

PART 3: EVALUATING EXPRESSIONS

$$a = 4, b = 2, c = -1$$

(a)(b)

(b)(c)

a(b + c)

(a)(b)(c)

PART 4: SOLVING NUMERIC PROBLEMS/ ORDER OF OPERATIONS

$$12(4) + 3 - 2$$

$$11.4 \div 1.2$$

$$2^5$$

$$\frac{3}{9} - \frac{2}{5}$$

$$6^2 \times 5^2$$

PART 5: DISPLAYING DATA

{5, 1, 4, 4, 4, 9, 10, 11, 1, 2, 5, 6, 7, 0, 2, 2, 0}

Make a frequency table using the data.

Find the mean, median, mode and range of the data

PART 6: PRIME FACTORIZATION

Find the prime factorization of each number and write your answer as a product of primes.

584

100502

PART 7: MIXED NUMBERS AND IMPROPER FRACTIONS

Change each mixed number to an improper fraction

$$5\frac{9}{10}$$

$$4\frac{1}{5}$$

$$6\frac{7}{8}$$

$$3\frac{11}{12}$$

Change each improper fraction to a mixed number

$$\frac{54}{2}$$

$$\frac{35}{6}$$

$$\frac{175}{12}$$

$$\frac{49}{5}$$

PART 8: PERIMETER

Find the perimeter of each figure.

Rectangle: $l = 6.5$ inches, $w = 4.2$ inches

Rectangle: $l = 3.5$ miles, $w = 1.7$ miles

Rectangle: $l = 5$ yards, $w = 2$ yards

PART 9: CIRCLES AND CIRCUMFERENCE

Find the circumference of each circle:

$$(c = \pi d)$$

$$d = 14 \text{ in}$$

$$r = 3.2 \text{ m}$$

$$d = 6.5 \text{ in}$$

PART 10: EXPECTED VALUE

Use Spinner B to answer each of the following questions.

1. If the number on the spinner tells the number of dollars you win, find the expected value of a spin.

2. Over the long term, would you expect to win, lose, or break even if each spin cost \$2?

PART 11: EQUATIONS

Solve each equation

$$32 + c = 56$$

$$b - 63 = 14$$

$$e + 11.8 = 13.1$$

$$a/6 = 19$$

$$b/7 = 25$$

$$1.8a = 9.72$$

PART 12: INTEGERS

Complete each problem.

$$G = 5 + (-3)$$

$$r = -4 + 4$$

$$(-7)^2 = p$$

Graph the following to the right:

P(6,-3)

B(0,-9)

T(-5,1)

PART 13: SQUARE ROOTS

Find the square root of each number:

$$\sqrt{9}$$

$$\sqrt{1}$$

$$\sqrt{100}$$

$$\sqrt{169}$$

$$\sqrt{900}$$

$$\sqrt{10,000}$$

$$\sqrt{9}$$

PART 14: TREE DIAGRAMS

Complete a tree diagram

Flipping a penny and flipping a dime.

Rolling a number cube, flipping a coin, and choosing a card from among cards marked A, B, C, D.

PART 15: THEORETICAL PROBABILITY

Two dice are rolled. Find each theoretical probability

A sum of 2

a sum less than 4

a sum of 1