

Practice Test #1

This test is meant to replicate the practice found at <https://www.mathproficiencytest.ca/>. I made this practice test slightly more difficult. That way, you will be more ready for the test. Feel free to reach out at duddhawork@gmail.com if you have any questions.



Section 1 (No Calculator)

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Duddhawork

Q1

What is $20.20 \div 0.4$?

Q2

What is 20.20×0.4 ?

Q3

What is the value of $20.21 + 0.71 - 16.3$?

Q4

What number is represented by this expanded form?

$$(2 \times 10^6) + (0 \times 10000) + (7 \times 100) + (3 \times 1) + (5 \times 10^{-2})$$

Q5

What is the value of $7 \times 8 - (24 \div 3 + 7^2)$?

Section 2 (With Calculator)

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Q1

Steve has \$4.04 in his bank account.
He bought a pack of gum for \$2.99 from this account.
He then deposits a cheque of \$407.03 and spends \$255.04
on groceries from the same account.

What is the balance in Liam's bank account after these
transactions?

Q2

A room is 8 m wide and 6 m long.

What is the length of the room's diagonal?

Q3

Which equation below has $x = \pi$ as a solution?

- a. $2(x - \pi) = 4$
- b. $2\pi + 2x = 4$
- c. $2\pi + 2x = 4\pi$
- d. $2(x - \pi) = 4\pi$

Q4

List these four fractions from greatest to least.

$$\frac{7}{9}, \frac{13}{20}, \frac{5}{3}, \frac{3}{5}$$

Q5

Tara want to buy a \$22.99 shirt that has a 15% discount.

What is the price of the shirt once the sale is applied (no tax)?
If she only has a \$20 bill, will she have enough to buy the shirt?

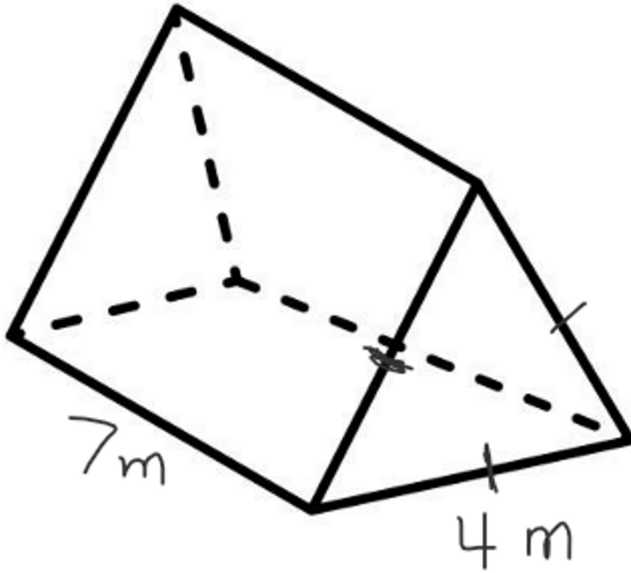
Q6

A car has travelled 20 km out of a trip that is 500 km in total. The car maintains a speed of 90 km/h.

After travelling for 3 hours and 45 minutes, how much farther does the car have to travel to reach its destination?

Q7

What is the surface area of this triangular prism? The base is an equilateral triangle.



Q8

A car has travelled 20 km out of a trip that is 500 km in total.
The car maintains a speed of 90 km/h.

After travelling for 3 hours and 45 minutes, how much time will it take the car to reach destination? Give your answer to the nearest minute.

Q9

What is the value of $\frac{3}{20} - 2 + \frac{3}{5} - \frac{2}{10}$?

Q10

Three students each shade a different part of 100×100 grid. Their shaded parts do not overlap.

- Kory shades 0.17 of the grid.
- Nabil shades $\frac{3}{10}$ of the grid.
- Sydney shades 3% of the grid.

How many cells of the 100×100 grid were left unshaded?

Q11

A 517 g jar peanut butter costs \$4.99.

A 2 kg jar of peanut butter costs \$19.99.

Which jar should you buy to get the most peanut butter for one dollar.

Q12

Roz and Sam are making pizzas.
Roz makes 2 pizzas for every 3 pizzas that Sam makes.
Together, they make 15 pizzas.

How many pizzas did Roz make?

Q13

After a 25% discount is applied to an item.

What is the fraction that represents the price of the item after the discount?
Write the reduced fraction.

Q14

A sand box is 6 m wide, 4 m long, and 30 cm high.

How many cubic meters of sand does it take to fill 80% of the sand box?

Q15

Write $\frac{2^4 \cdot 2^{2021}}{2^{2020}}$ as a single power and evaluate it.

Q16

Which options are equivalent to $\frac{5}{8}$?

- a. $\frac{100000}{160000}$
- b. 6.25×10
- c. $\frac{12}{32}$
- d. 62%

Q17

Which options are equivalent to $3\frac{2}{5}$?

- a. 340%
- b. $3.4 \times \pi^0$
- c. $\frac{17}{5}$
- d. 3.04

Q18

A bag contains 130 marbles.

There are red, blue, and yellow marbles in a ratio of 2:6:5.

You take one marble out of the bag at random.

What is the probability of choosing a yellow marble?

Q19

Merrick is writing his Math Proficiency Test.
The math portion of the test is worth 70%.
The pedagogy portion of the test is worth 30%.

He answered 42 questions correctly out of 50 questions on the math portion.

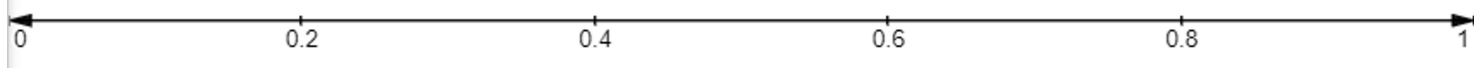
How many questions does he need to answer correctly on the pedagogy portion of the test if we want to finish with at least 80%? The pedagogy portion of the test has 21 questions.

Q20

Write $\frac{45}{175}$ as a reduced fraction, a decimal, and as a percentage.

Q21

Place $\frac{4}{3} \div \frac{16}{9} \times \frac{2}{5}$ on the number line.



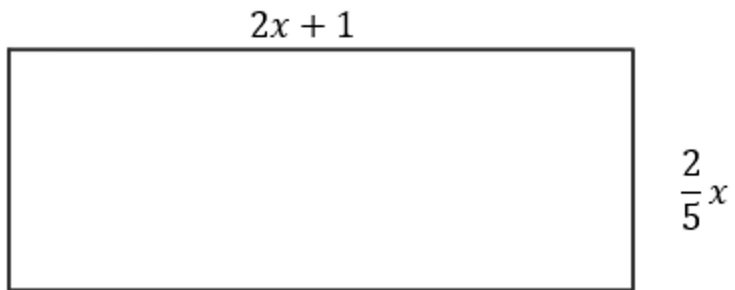
Q22

The first four terms of a sequence are $\frac{1}{1}, \frac{2}{4}, \frac{3}{9}, \frac{4}{16}, \dots$

Evaluate the 57th term of this sequence.

Q23

The rectangle below has a perimeter of 26 meters. What is the value of x ?



Q24

Write the number for 4 millions + 3 hundreds + 3 tenths.

Q25

Roz and Sam deliver flyers.

Roz gets paid a flat rate of 10\$ per day with an additional \$0.10 per delivered flyer.

Sam has no flat rate per day but gets paid \$0.2 per delivered flyer.

How many flyers does Sam need to deliver to make more money than Roz?

Try to solve this problem both graphically and algebraically.

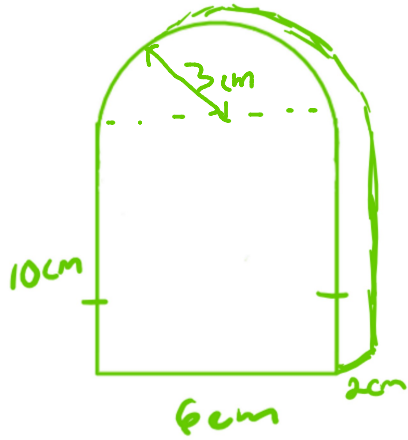
Q26

Five cookies cost 6.99 Canadian dollars.
Each cookie costs the same amount.

What is the cost of 17 cookies in US dollars if 1 Canadian dollar is 0.83 US dollar?

Q27

What is the volume of this prism? (A gravestone)



Q28

The first four terms of a sequence are shown below.

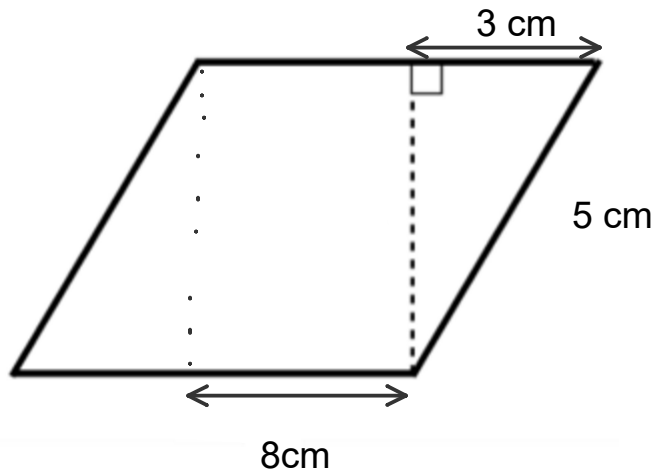
2021, 2019, 2017, 2015, ...

The pattern continues to decrease by the same amount.

What is the 1000th term?

Q29

The parallelogram below will be cut into two triangles.
What is the area of each triangle?



Q30

How many hundreds of thousand does 1 034 597 have?

Q31

You have completed 412 levels out of the 417 levels of a game.

How many percent of the game do you have left to complete?
Write your answer with 2 decimal places.

Q32

A bag of 80 balls.

- $\frac{1}{10}$ of the balls are red.
- 25% are blue.
- The rest are white.

What is the probability of choosing a white ball on the second pick given that the first ball drawn was blue?

The blue ball was not put back in the bag after the first pick.

Q33

In year one Diana sold 45 necklaces.
In year two she sold 108 necklaces.

Year	# Sold
1	45
2	108
3	???

If her sales keep growing at the same rate, how many necklaces is she expected to sell in year 3?

Note that the sales don't go up by 63 necklaces each year. Instead they increase at the same rate (percentage).

Q34

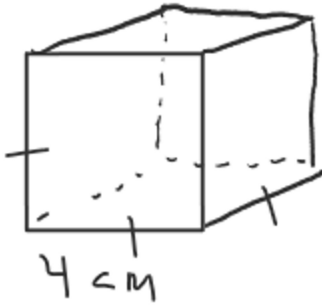
A recipe has 550 g of yogurt and 1 cup of water.

What is the ratio in grams of yogurt to water?

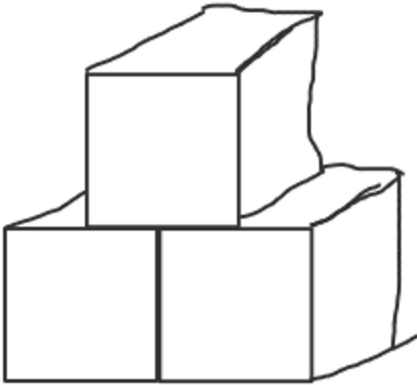
Note that a cup of water is 250 ml and one ml weighs one gram.

Q35

A cubic box has side lengths of 4 cm.



We stack one box centered above two boxes as shown below.



What is the surface area of the prism above?

Q36

Which of the following are equivalent to 1.7%?

- a. 0.17
- b. $\frac{1070}{1000}$
- c. 0.017
- d. $\frac{17}{1000}$

Q37

A bank account charges a monthly fee and a cost per transaction.

A person who made four transactions had a total cost of \$9.

A person who made six transactions had a total cost of \$10.

# of Transactions	Total monthly Cost (\$)
4	9
6	10

What would be the total monthly cost of someone who made 17 transactions with the same account?

Q38

John ate one third of a cake.

Alex ate two fifths of what was left of the cake.

What percentage of the original cake did Alex eat?

Q39

A train travels at 89 kilometers per hour.

How many centimeters per second does the train travel at?

Q40

A recipe for six people calls for 200 g of onions and 60 g of garlic.

How much of each ingredients do we need to make this recipe for seven people?

Q41

Evaluate $10 \times 4 - 2 \times (4^2 \div 4) \div 2 \div \frac{1}{2} + 9$.

Q42

Which numbers are between 4.175 and 4.156?

- a. 416%
- b. 4.149
- c. $\frac{41600}{10000}$
- d. 4.16

Q43

Evaluate $4 \div 3(4 + 5)$.

Q44

Which number is not greater than 4.36×10^3 ?

- a. 4036
- b. 4360
- c. 0.4360
- d. 0.00436

Q45

An pack of gum cost \$1.57 after applying a 13% tax.

How much did the pack of gum cost before applying the 13% tax?