

Math BLEPT Review Session

With Sir Bryan



#PAPASAAKO!
#TOPNOTCHERAKO!

1:00:00

proper



mixed



1. How many $\frac{1}{16}$ are there in $2\frac{5}{8}$?

a. 42

b. 44

c. 46

d. 48



$$2\frac{5}{8}$$

-

$$\boxed{2\frac{5}{8}}$$

$$-\frac{1}{16}$$

$$\frac{1}{16}$$

$$\frac{21}{8}$$

$$\boxed{\frac{1}{16}}$$

$$\frac{21}{8} \times \frac{2}{1} = \frac{42}{8}$$

$$\boxed{\frac{21}{8} \times \frac{2}{1} = 42}$$

+ x ÷



Students choose an option

LCM



20



2. A blue neon light blinks every 4 seconds. A red one blinks every 5 seconds while a green one blinks every 6 seconds. How many times will they blink together in half an hour?

- a. 1
- b. 5
- c. 10
- d. 30



30 times

$$2 \times 2 \times 5 \times 3 = 60 \text{ Sec (1)}$$

+ x ÷



Students choose an option

$\sqrt{123}$
☆



3. Which of the following is divisible by 3 but not by 9?

~~a.~~ $11,070 = 9$

b. ✓ $40,206 = 12$

c. $45,072$

d. $19,386$

Sum div 3

Sum div 9



+ x ÷



Students choose an option



4. The distance between two towns on a given map is $2\frac{3}{4}$ cm. If $\frac{1}{2}$ cm represents 6 km, what is the distance between two towns?

- a. 18 km
- b. 33 km
- c. 36 km
- d. 42 km

$$\frac{2\frac{3}{4}}{\frac{1}{2}} = \frac{11}{4} \div \frac{1}{2} = \frac{11}{4} \times \frac{2}{1} = \frac{11 \cancel{2}}{2 \cancel{4}} = \frac{11}{1} = 11$$

5 5 7 6 = 33



Discount



5. Margo paid PHP 400 for a blouse. If the blouse was sold at 20% discount, what was its original price?

- a. PHP 80
- b. PHP 480
- c. PHP 500
- d. PHP 540

$$RP = \frac{SP}{1 - DR} = \frac{400}{1 - 0.2} = \frac{400}{0.8}$$

$$= \text{P}500$$



+ x ÷



Students choose an option

$$RP = \frac{SP}{1 - DR}$$

$$\left[500 = \frac{400}{(1 - DR)} \right]$$

$$\frac{\cancel{500}(1 - \underline{DR})}{\cancel{500}} = \frac{400}{500}$$

$$SP = 400 \quad \text{M. } \cancel{500}$$

$$DR = ?$$

$$\underline{1 - DR} = 0.8$$

$$-DR = 0.8 - 1$$

$$\cancel{DR} = \frac{-0.2}{\cancel{-1}}$$

$$DR = 0.2$$

$$\boxed{20\%}$$



6. In a sequence of starts and stops, an elevator travels from the first floor to the fifth floor and then to the second floor. From there, the elevator travels to the fourth floor and then to the third floor. If the floors are 4 meters apart, how far has the elevator traveled?

a. 24 m

b. 36 m

c. 40 m

d. 60 m ☆

$$\begin{array}{l} 1^{st} - 5^{th} = 4 \\ 5^{th} - 2^{nd} = 3 \\ 2^{nd} - 4^{th} = 2 \\ 4^{th} - 3^{rd} = 1 \end{array} \quad \left. \begin{array}{l} + \\ + \\ + \\ + \end{array} \right\} 10 \times 4 = 40$$

+ x ÷



$$\sqrt{123}$$



$$-1 - 2 = -3$$



7. Which of the following has the greatest value?

a.

0.351



b.

$$35/100 = 0.35$$

c.

$$3/10 = 0.30$$

d.

$$3/9 = 0.333$$

0.35

0.357



+ x ÷



Students choose an option

$$\sqrt{123}$$

☆

$$\frac{1}{3} \quad 3 \overline{) \frac{4}{3}}$$

$$\boxed{\frac{1}{3}} \quad \star$$

$$\frac{7}{4} = 4 \overline{) \frac{7}{3}}$$

$$\frac{13}{4}$$



8. Which of the following numbers is greater than -

~~3/27?~~ $-\frac{3}{2} = \boxed{-1.5}$

a.

$$-4/3 = -1\frac{1}{3} \text{ or } -1.33$$

b.

$$-3 = -3$$

c.

$$-7/4 = -1\frac{3}{4} \text{ or } -1.75$$

d.

$$-2 = -2$$



+ x ÷



Students choose an option



9. Simplify $\frac{1}{3} + \frac{2}{5} - \frac{2}{6}$

a. $\frac{1}{14}$

b. $\frac{1}{5}$

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

d. $\frac{2}{5}$

$$\left[\frac{1}{3} + \frac{2}{5} - \frac{2}{6} \right] \times 30$$

$$\frac{10 + 12 - 10}{30} = \frac{12}{30} = \boxed{\frac{2}{5}}$$

+ x ÷



Students choose an option

$$\sqrt{123}$$

☆

$$\begin{array}{r} 4 \overline{) 123} \\ \underline{8} \\ 43 \\ \underline{40} \\ 3 \end{array}$$



10. Find the product: $(2\frac{1}{2})(\frac{5}{7})(\frac{2}{5})$

- a. 0
b. $\frac{5}{14}$
c. 1
d. $\frac{5}{7}$

$$\begin{array}{c} \downarrow \\ \left(\frac{5}{2}\right)\left(\frac{5}{7}\right)\left(\frac{2}{5}\right) \\ \swarrow \quad \searrow \\ 5 \quad 25 \\ \hline 7 \quad 14 \end{array} \quad \left(\frac{2}{5}\right) = \boxed{\frac{5}{7}}$$

+ x ÷



Students choose an option

10:00



$$2(-3)^2 - (-4)(-5) - 2$$

GENIDAS

11. Simplify: ~~$2(-3)^2 - (-4)(-5) - 2$~~ ?

a. ☒ -4

b. 14

c. 28

d. 10

$$2(9) - (-4)(-5) - 2$$

$$= 18 - 20 - 2$$

$$= -2 - 2$$

$$= -4$$

+ x ÷



Students choose an option

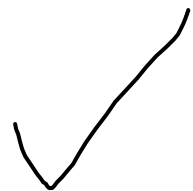
$$6 \div 2 \times 3$$

$$\begin{array}{r} \times \quad 6 - 6 \\ \quad \quad 1 \end{array}$$

$$6 \div 2 \times 3$$

$$3 \times 3$$

$$\boxed{9}$$





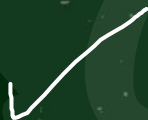
12. What is the least common multiple of 9, 8, and 8?

a. 36

b. 54

c. 72

d. 144



	3	9	8	18
X	3	3	8	6
X	2	1	8	2
X	2	1	4	1
X	1	2	1	

+ x ÷



Students choose an option

$$\sqrt{123}$$



$\text{div}_8 = \text{last } 3 \text{ digits}$

13. What are the two digits which when inserted in the blank spaces will make 234_ _ divisible by 8?

- ✓ a. 3 and 2 $\rightarrow 23432$
- ✓ b. 5 and 6 $\rightarrow 23456$
- ✓ c. 0 and 0 $\rightarrow 23400$
- d. All of the above

$$\begin{array}{r} 54 \\ 8 \overline{) 432} \\ \underline{40} \\ 32 \end{array}$$

$$\begin{array}{r} 40 \\ 50 \overline{) 200} \\ \underline{200} \end{array}$$

$$\begin{array}{r} 57 \\ 8 \overline{) 456} \\ \underline{40} \\ 56 \end{array}$$

$$\begin{array}{r} 57 \\ 8 \overline{) 456} \\ \underline{40} \\ 56 \end{array}$$

+ x ÷



Students choose an option

$$\sqrt{123}$$

☆

$$1.3 = 4$$



14. Which of the following is NOT true about the sum of two consecutive odd integers?

- ✓ a. It is even
- ✓ b. It is divisible by 4
- ✗ c. It is divisible only by 12
- ✓ d. It is always divisible by 1



+ x ÷



Students choose an option



15. The ratio of the number of boys to the number of girls in a class is 2:3. If there are 40 students in the class, how many boys are there?

- a. 8
- ☒ b. 16
- c. 18
- d. 24

$x = \text{boys}$
 $y = \text{girls}$
 $x + y = 40$

$$2x = \text{boys} = 2(8) = 16$$

$$2x + 3y = 40$$

$$\frac{5x}{5} = \frac{40}{5}$$

$$x = 8$$

+ x ÷



Students choose an option

DIRECT \rightarrow \uparrow, \uparrow , \downarrow, \downarrow $\overbrace{ab=cd}^{\quad}$
 $\underbrace{\quad}$

INDIRECT \rightarrow \uparrow, \downarrow , \downarrow, \uparrow $ab=cd$

PARTITIVE \rightarrow partition

DIRECT ☆



16. Mrs. Jimenez paid PHP 94.50 for 3 ½ dozens of eggs. How much would 2 dozens of such eggs cost?

a. 50.50

b. 54.00

c. 55.00

d. 56.00

$$94.50 \quad 35 = \frac{x}{1} \cdot 2$$

$$3.5x = 94.50 \times 2$$

$$\begin{array}{r} 35x = 189 \\ \hline 35 \quad 33 \end{array}$$

$$x = 54$$

+ x ÷



☆

Students choose an option



17. Arthur divides his day into leisure, sleep, and work in the ratio 1:2:3. How many hours does he spend working?

a. 4

b. 8

c. 10

d. 12

Let x be the time

x - leisure

$2x$ - sleep

$3x$ - work

$$= 3(4) = \textcircled{12}$$

$$x + 2x + 3x = 24$$

$$\frac{6x}{6} = \frac{24}{6}$$

$$\boxed{x = 4}$$

+ x ÷



Indirect



18. It takes 20 men to build a house for 60 days. How many men will be needed to build one in only 15 days?

- a. 5
- b. 80
- c. 100
- d. 120

~~20(60) = x(15)~~

$$\begin{aligned} 20(60) &= x(15) \\ 1200 &= 15x \\ \frac{1200}{15} &= \frac{15x}{15} \\ x &= 80 \end{aligned}$$



+ x ÷



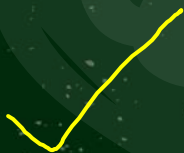
Students choose an option



20. In a class of 40 students, 40% are boys. How many are girls?

- a. 16
- b. 18
- c. 22
- d. 24

40%



+ x ÷



Students choose an option

10:00



21. In an examination, 24% of the students failed in math and 33% in science. If 9% of the students failed in both subjects, find the percent of students who passed in both subjects.

a. 43%

b. 48%

c. 52%

d. 81%☆

$$\text{failed}_m = 24\%$$

$$\text{failed}_s = 33\%$$

$$57\%$$

$$- 9\%$$

$$48\%$$

+ × ÷



Students choose an option



22. On board an inter-island ship, 25% of the passengers travel 1st class, 30% travel 2nd class, and 729 travel 3rd class. How many passengers are there?

a. 1254

b. 1480

c. 1560

d. 1620

$$1st = 25\%$$

$$2nd = 30\%$$

$$3rd = 45\% \quad 729$$
$$\frac{729}{45} = 162$$
$$162 \times 10 = 1620$$

$$\frac{729}{45} = 1620$$

+ x ÷



Students choose an option



23. The introductory price of a certain item was PHP 12. What is the percent increase in the price of the item if two years later its price reaches PHP 42?

- a. 150%
- b. 200%
- c. 250%
- d. 300%

$$\frac{30}{12} = 2.5 \text{ or } 250\%$$



$\sqrt{123}$
☆



24. Which of the following gives the prime factorization of 54?

a. 22×32

b. 2×33

c. 23×33

d. 23×3

$2 \times 3 \times 9$

54
X

2×3^3



+ x ÷



Students choose an option



25. A boat travels 8 kph in still water. If it can travel a given distance upstream in 5 hours and the same distance downstream in 3 hours, what is the rate of the current?

a. 2 ⁽⁺⁾ $x = \text{speed}$

b. 5

c. 6

d. 9

$$8 - x = 45$$

$$8 + x = 05$$

☆ $d = rt$

$$5(8 - x) = 3(8 + x)$$

$$40 - 5x = 24 + 3x$$

$$8x = 16$$

$$x = 2$$





26. What is the value of $x - 6$ if $2(x-3) + 5 = 19$?

a. -1

b. 4

c. 16

d. 20

Handwritten work for the problem:

$$\begin{array}{r} 10 - 6 \\ \boxed{4} \end{array}$$

$$2x - 6 + 5 = 19$$

$$2x - 1 = 19$$

$$\frac{2x}{2} = \frac{20}{2}$$

$$x = 10$$

+ x ÷



Students choose an option



27. Apo weighs one third as much as her mother Angela.
If Apo weighs 43.5 lbs., how much does Angela weigh?

a. 62.5

b. 95.7

c. 130.5

d. 150

$$\begin{aligned}x &= \text{Apo} \\ y &= \text{Angela}\end{aligned}$$

$$\begin{aligned}x &= \frac{1}{3}y \\ x &= 43.5\end{aligned}$$

$$3 \left[43.5 = \frac{1}{3}y \right]$$

$$130.5 = y$$

+ x ÷



Students choose an option



28. Lucille is 4 times as old as Nicole. Six years from now, she will be twice as old as Nicole. How old are they now?

- a. Lucille 12; Nicole 3
- b. Lucille 16; Nicole 4
- c. Lucille 3; Nicole 12
- d. Lucille 4; Nicole 16

$$\begin{array}{lcl} \text{Lucille} & - & 4x \\ \text{Nicole} & - & x \end{array} \quad \begin{array}{c} \text{6 yrs} \\ + \\ 6 \end{array} \quad \begin{array}{c} 4x+6 \\ x+6 \end{array}$$

$$4x+6 = 2(x+6)$$

$$4x+6 = 2x+12$$

$$\begin{array}{r} 2x = 6 \\ \hline x = 3 \end{array}$$

+ x ÷



Students choose an option



29. The sum of two numbers is 52 and their difference is 20. What is the larger number?

- a. 16
- b. 26
- c. 36
- d. 46

$$\begin{aligned}x + y &= 52 \\x - y &= 20\end{aligned}$$

$$\frac{2x}{2} = \frac{72}{2}$$

$$x = 36$$

$$y = 16$$

+ x ÷



Students choose an option



30. Two numbers are in the ratio 4:3. What are the numbers if their sum is 84?

- a. 36 and 48
- b. 36 and 24
- c. 24 and 63
- d. 12 and 36

$$4x + 3x = 84$$

$$7x = 84$$

$$\frac{7x}{7} = \frac{84}{7}$$

$$x = 12$$

$$48$$

$$36$$



+ x ÷



Students choose an option



