MIDTERM RE TEST (TERM 2 A.Y. 2024)

TEST QUESTIONNAIRE

Subject: Basic Mathematics	**Date:** _____
Subject Code: ค23102	**Time:** _____
Year Level: Matthayom 3	**Time Allowed:** 90 minutes
Class Section/s: M3/1 ,M3/2	**Teacher:** Ms. Amy C. Caballero

Part 1: Multiple – Choice (35 items)

Standard M1.3/1. Apply systems of linear equations in two – variables to solve mathematical problems.

1. A system of linear equation in two variables are written in the form

$$\left.\begin{aligned} A_1x + B_1y &= C_1 \\ A_2x + B_2y &= C_2 \end{aligned}\right\}$$ where _____.

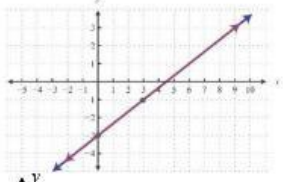
a. A, B and C are real numbers

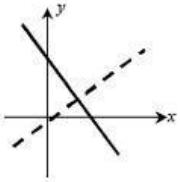
b. A and B are both zero

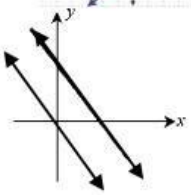
c. A, B and C are real numbers; A and B should not be both zero

d. A and B are not both zero

2. Which system shows no solutions?

a. 

b. 

c. 

d. both b and c

3. How does a system with infinite solutions appear on the graph?

a. They are parallel lines.

b. They are intersecting lines.

c. They are coinciding lines

d. They are perpendicular lines.

4. The sum of two numbers is 25 and their difference is 11. Which of the following best represents the statements? Let x be the larger number and y be the smaller number.

a. $\left.\begin{aligned} x - y &= 25 \\ x + y &= 11 \end{aligned}\right\}$

b. $\left.\begin{aligned} x + y &= 25 \\ x - y &= 11 \end{aligned}\right\}$

c. $\left.\begin{aligned} x + y &= 25 \\ y - x &= 11 \end{aligned}\right\}$

d. $\left.\begin{aligned} y - x &= 25 \\ x + y &= 11 \end{aligned}\right\}$

LIVEWORKSHEETS

5. *At present, Annie is x years old*, which of the following best represents Annie's age in 12 years?

a. x + 12 b. 12 – x c. x – 12 d. 12x

6. Which of the following system shows parallel lines?

a. $\left.\begin{matrix} x-2y=3 \\ x-y=2 \end{matrix}\right\}$ b. $\left.\begin{matrix} x-y=25 \\ 2x-2y=50 \end{matrix}\right\}$

c. $\left.\begin{matrix} x+y=9 \\ y=-x+6 \end{matrix}\right\}$ d. $\left.\begin{matrix} x+y=-4 \\ x-y=1 \end{matrix}\right\}$

7. Which of the following best represents the statement "four less than twice a number is 5"?

a. $4-2x=5$ b. $2x-4=5$

c. $4-x=5$ d. $4=-2x+5$

8. A systems has only one solution, which of the following statement is true?

a. The two lines intersect at two points.

b. The two lines never intersect each other.

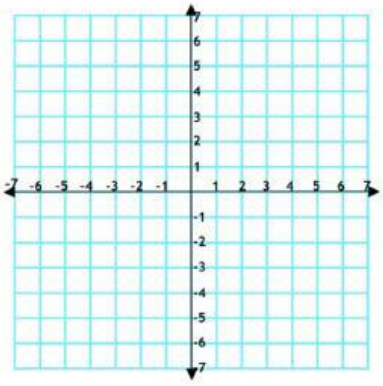
c. The two lines are coinciding.

d. The two lines intersect at exactly one point.

9. Given that $2x-5y=10$, find the value of y, when $x=-10$

a. -4 b. -6 c. 6 d. 4

For items 10 – 13. Given a system of linear equation: $\left.\begin{matrix} x-y=-4 \\ 2x+3y=-3 \end{matrix}\right\}$



10. What are the slopes of the two equations?

a. $4\ and\ 3$ b. $-4\ and\ -3$

c. $1\ and\ \frac{2}{3}$ d. $1\ and\ \frac{-2}{3}$

11. How does the graph of the system looks like?

a. parallel lines b. coinciding lines

c. perpendicular lines d. intersecting lines

12. What is the y- intercept of the first equation?

a. (0, -4) b. (0, 4)

c. (0, 1) d. (0, -1)

13. What is the solution to the system?

a. (3, -1) b. (-3 ,1)

c. (3, 1) d. (-3, -1)

LIVEWORKSHEETS

For items 14 - 15. Kaimook bought 2 pens and 3 notebooks for 35 baht. She also bought 3 pens and 6 notebooks for 60 baht.

14. Suppose x is the number of pens and y is the number of notebooks. Which of the following best represents the statement above?

a. $\left.\begin{matrix} 2x + 3y = 35 \\ 3x - 6y = 60 \end{matrix}\right\}$

b. $\left.\begin{matrix} 2x - 3y = 35 \\ 3x - 6y = 60 \end{matrix}\right\}$

c. $\left.\begin{matrix} 2x + 3y = 35 \\ 3x + 6y = 60 \end{matrix}\right\}$

d. $\left.\begin{matrix} 2x + 6y = 35 \\ 3x + 3y = 60 \end{matrix}\right\}$

15. How much did each pen and notebook cost her?

a. A pen is 5 baht and a notebook is 10 baht.

b. A pen is 10 baht and a notebook is 5 baht.

c. Each pen cost 6 baht and each notebook cost 12 baht.

d. Each pen cost 12 baht and each notebook cost 6 baht.

Standard M3.1/1. Apply knowledge of the surface area and volume of pyramids, cones and spheres in problem solving : Mathematics and real-life problems.

16. Which two mathematical shapes could you combine to create this structure below?



a. cone and sphere

b. cylinder and sphere

c. cone and cylinder

d. pyramid and sphere

17. How many faces does a triangular pyramid have?

a. three

b. five

c. six

d. four

18. Given a sphere with a diameter of 35 inches, what is its radius?

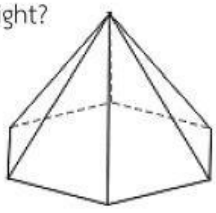
a. 35 in.

b. 17in.

c. 17.5 in

d. 70 in.

19. What is the name of the 3d shape on the right?



a. pentagonal pyramid

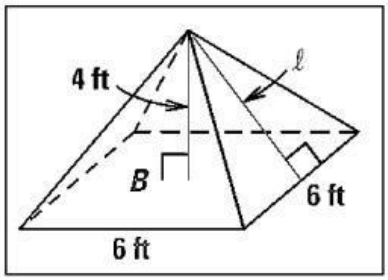
b. hexagonal pyramid

c. cone

d. octagonal pyramid

LIVEWORKSHEETS

For items 21 – 22, refer to the figure on the right.



20. What is the slant height of the pyramid on the right?

a. 5ft b. 4ft

c. 9ft d. 3 ft

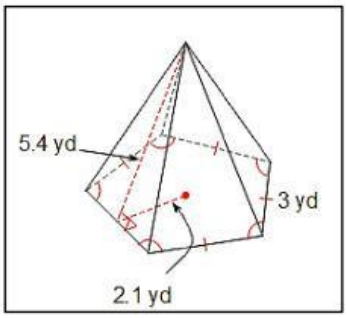
21. What is the lateral area of the pyramid?

a. $30ft^2$ b. $120ft^2$ c. $150ft^2$ d. $60ft^2$

22. What is the total surface area of the pyramid?

a. $36ft^2$ b. $96ft^2$ c. $156ft^2$ d. $90ft^2$

For items 23 – 24, refer to the figure on the right.



23. What is the length of the figure's apothem?

a. 5.4 yard b. 2.1 yard

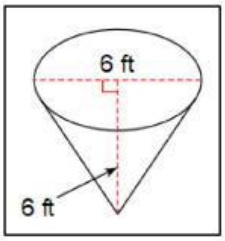
c. 3 yard d. 1.5 yard

24. What is the surface area of the pyramid on the right?

a. $56yd^2$ b. $84yd^2$

c. $44yd^2$ d. $46yd^2$

For items 25 – 26, refer to the figure on the right.



25. What is the slant height (l) of the cone on the right?

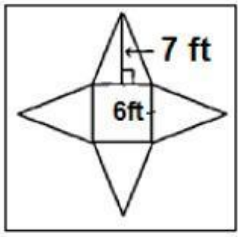
a. 3ft b. 5ft

c. 3.5ft d. $3\sqrt{5}$ ft

26. What is the volume of the cone (in nearest whole)? Use $\pi = 3.14$

a. $226ft^3$ b. $57ft^3$ c. $60ft^3$ d. $83ft^3$

27. What is the surface area of the 3d object below?



a. $120ft^2$ b. $168ft^2$

c. $84ft^2$ d. $204ft^2$

LIVEWORKSHEETS

For items 28 – 29.

A square pyramid has a base length of 12 inches on each side and a height of 15 inches.

28. What is the volume of the pyramid?

a. 576in^3 b. 2160in^3

c. 720 in^3 d. 1080 in^3

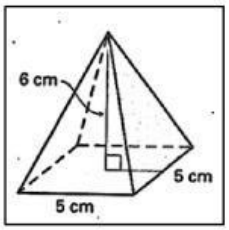
29. What is the surface area of the pyramid (in the nearest whole)? Hint : $\sqrt{261} \approx 16.2$

a. 388in^2 b. 338 in^2

c. 324in^2 d. 523 in^2

For items 30 - 31, refer to the figure on the right.

30. What is the slant height of the pyramid on the right?



a. 4.5cm b. 5.5 cm

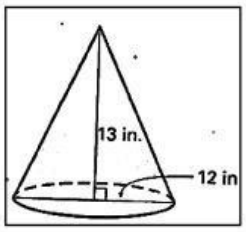
c. 6.5 cm d. 7.8 cm

31. What is the lateral area of the pyramid below?

a. 57.5cm^2 b. 78cm^2

c. 65cm^2 d. 32.5cm^2

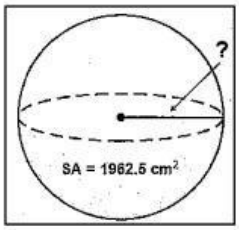
32. What is the volume of the cone to the nearest tenth? Use $\pi = 3.14$



a. 1470.3 in^3 b. 489.8 in^3

c. 5881.1 in^3 d. 1960.4 in^3

33. What is the radius of the sphere with surface area of 1962.5cm^2 ? Use $\pi = 3.14$



a. 10.5 cm b. 12.5cm

c. 13 cm d. 12 cm

34. A pyramid has a rectangular base with side lengths 4cm and 6cm respectively, if the capacity of the pyramid is 64ft^3, what is its height?

a. 4cm b. 6 cm

c. 3.5cm d. 8cm

35. Ben wants to wrap his gift in a cone shape with a radius of 2 yd and a slant height of 4.5 yd; about how much paper will he need? Use $\pi = 3.14$

a. 41yd^2 b. 31yd^2

c. 48yd^2 d. 56yd^2

LIVEWORKSHEETS