Pretest DB MTH-P024

Information

The use of the calculator is allowed

Formulas:

SQUARE

Area	A=s^2	s=side
Perimeter	P=4s	

CIRCLE

Area	A=$\Pi\ r^2$	Π= 3.1416
Perimeter or circumference	C=2Πr	

1foot square = 0.092903 m²

(4 points)

1) Find two equivalent fractions for each of the following fractions:

a. $\frac{5}{3}$ **=**

b. $\frac{2}{7}$ **=**

(2 points)

2) Find the missing number x that will make the two fractions equivalent:

$\frac{9}{5} = \frac{18}{x}$ **x=**

(2 points)

3) Convert the improper fraction below to mixed fraction:

$\frac{20}{9}$ =

(4 points)

4) Convert these mixed fractions to improper fractions:

$2\frac{3}{7}$ =

$4\frac{1}{10}$ =

(3points)

5) Add the following fraction:

$$\frac{1}{6} + \frac{3}{4} =$$

(3 points)

6) Subtract the following fraction:

$$\frac{11}{12} - \frac{2}{3} =$$

(4 points)

7) Mrs. Bunny went carrot-picking and picked $\mathbf{5}\frac{3}{4}$ Kg of orange carrots and $\frac{7}{4}$ Kg of weird purple carrots.

How many kilograms of carrots did Mrs. Bunny pick altogether?

(10 points)

8) Calculate the following fraction products and quotients.
(do not forget to simplify.)

a) $\frac{5}{12} \times \frac{3}{4} =$

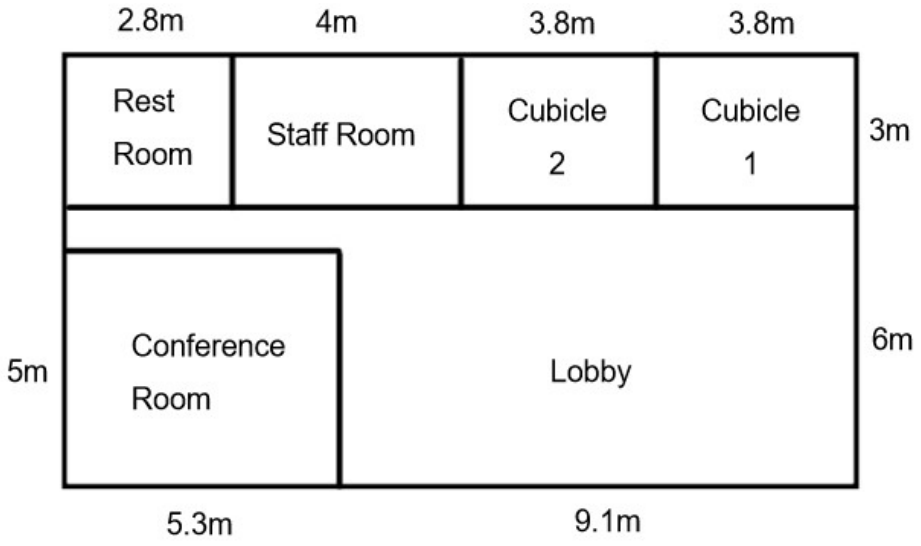
b) $\frac{5}{4} \times \frac{10}{3} =$

c) $\frac{2}{3} \div 4 =$

d) $\frac{9}{5} \div \frac{21}{20} =$

(15 points)

9) Examine the plan of the office below. Find the perimeters and areas of each room and complete the table. Show your calculations and the units of measure.



	Length	Width	Perimeter	Area
Conference Room				
Staff Room				
Cubicle 2				
Rest Room				
Lobby				

(4 points)

10) What is the total area of the following figures?

a. The area of a triangle whose base is 3m and whose height is 2m?

b. The area of a square whose side is 60 mm?

(4 points)

11) What are the total areas of 4 circular tricycle wheels if each wheel has a radius of 40cm?

(6points)

12) Measure the following angles:
(use your protractor)

a)

b)

(4 points)

13) Draw the following angles with a protractor:

a) 155°

b) 20°

(4 points)

14) Convert the following measurements:

$5ft^2$ into ---------- m^2

$22m^2$ into ---------- ft^2

(15points)

15) A student placed balls with the numbers from 1 to 9 in a bag. Then the student randomly selected balls from the bag, replacing the ball each time, and recorded the numbers.

9	1	8	7	9
4	8	6	2	4
5	5	8	7	3

a) Construct a frequency table using the above data:

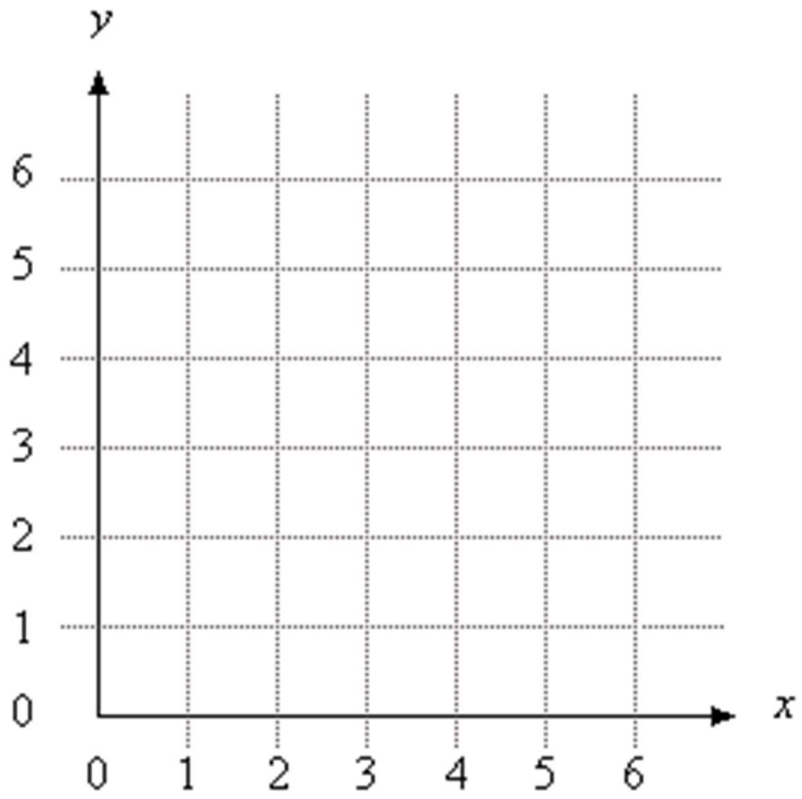
Ball number	**Frequency**

b) What title would you give to this table?

c) What are the quantified objects?

d) What are the statistical data?

e) Create a bar graph to represent the rolling dice.
(Include a title and label the axes).



(5 points)

16)

Robert passed 6 exams in Science this November.

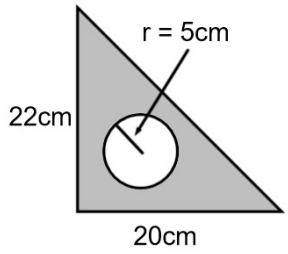
In the first week he scored 84%, in the second week he scored 80% and 78%, in the third week he got 75% and 71%, and in the last week he got 82%.

Calculate the average of his grade for the whole month.

(5 points)

17)

Calculate the Area of the shaded part of the following diagram:



(5 points)

18)

Find the scale of the following drawing of a house. Then use the scale to calculate the length of the diameter of the circular window. Then calculate the Area of the window.