ST. MARY'S DOMINICAN HIGH SCHOOL
Pre-Algebra Summer Worksheet

Dear student:_____(name)

The purpose of this summer worksheet is to help you practice your math skills while providing examples of ACT/PSAT-type questions. The questions were specifically chosen because they relate to topics that will be used in your math class next year or because they cover material you have learned that is on the ACT/PSAT.

In order to receive full credit for your work, be sure to follow these instructions.

1. **Print out the worksheet (print on both sides) and SHOW ALL WORK neatly and in a concise manner next to each question– in PENCIL! All answers must be explained by math work or words. <u>All problems must have work or an explanation!</u>**

2. **Check your answers with the answer key provided. Review and re-try any questions you missed. If you have difficulty with any of the concepts, please review them during the summer.**

3. **Bring your completed assignment to school on the second day of class.**

Standardized Test-Taking Tips:

1. Underline or circle key numbers/words in the problem.
2. Read the question that is being asked. Many times the answer to the question is not necessarily the solution to the equation.
3. As you eliminate choices, scratch them out.

Your work will be collected, and a grade will be given based on **<u>completeness and effort</u>**.
Try your best!!! If you need assistance, consult the video tutors available at khanacademy.org.

Sincerely,

St. Mary's Dominican Mathematics Department

1. What fraction lies exactly halfway between $\frac{2}{3}$ and $\frac{3}{4}$?

   A. $\frac{3}{5}$

   B. $\frac{5}{6}$

   C. $\frac{7}{12}$

   D. $\frac{9}{16}$

   E. $\frac{17}{24}$

2. What is the greatest common factor of 42, 126, and 210?

   A. 2
   B. 6
   C. 14
   D. 21
   E. 42

3. Bella wants to make 3 gallons of punch for a party. She mixes 2 gallons of cranberry juice with 1 gallon of orange juice. Later, Bella finds out she actually needs 9 gallons of punch instead of 3. How much cranberry juice does she need for the 9-gallon mixture?

   A. 3
   B. 4
   C. 5
   D. 6
   E. 7

4. If apples are 35 cents or 3 for $1.00, how much is saved by buying them 3 at a time?

   A. 5 cents
   B. 3/5 cent
   C. $1\frac{2}{3}$ cents
   D. $11\frac{2}{3}$ cents
   E. $1.05

5. What is the least common multiple of 70, 60, and 50?

   A. 60
   B. 180
   C. 210
   D. 2,100
   E. 210,000

6. How many prime numbers are between 20 and 30?

   A. 1
   B. 2
   C. 3
   D. 4
   E. 5

7. Kim earned an 85% on a test that had 40 questions. How many questions did she **miss**?

   A. 4
   B. 6
   C. 8
   D. 17
   E. 34

8. A car rental agency charges $40 per day for the first 7 days and $35 a day for each day after that. How much would Joe be charged if he rented a car for 10 days?

   A. $375
   B. $385
   C. $395
   D. $405
   E. $415

9. What is 6% of 1250?

   A. 75
   B. 150
   C. 208
   D. 300
   E. 750

10. A jacket with an original price of $160 is on sale for 15% off. What is the sale price?

    A. $120
    B. $136
    C. $140
    D. $144
    E. $155

11. If $m = 4$, $n = 5$, and $p = 9$, what is the value of $mp - mn$?

    A. 16
    B. 31
    C. 41
    D. 56
    E. 81

12. The eighth-grade girls' basketball team played a total of 13 games this season. If they scored a total of 364 points, what was their average score per game?

A. 13
B. 16
C. 20
D. 28
E. 30

13. The cost of a long-distance phone call to a certain city is \$1.05 for the first minute and \$0.15 for each additional minute or part thereof. What is the cost of a 15-minute phone call?

A. \$1.20
B. \$2.25
C. \$3.15
D. \$3.30
E. \$3.45

14. When 40% of 60 is added to 12% of 600, the resulting number is

A. 24
B. 72
C. 96
D. 140
E. 180

15. A park has a grassy section that covers $2\frac{1}{3}$ acres. Denny mowed half the grassy section. What is the number of acres that Denny mowed?

A. $1\frac{1}{6}$
B. $1\frac{1}{3}$
C. $1\frac{2}{3}$
D. $1\frac{5}{6}$

16. In ΔABC, the sum of the measures of $\angle A$ and $\angle B$ is 47°. What is the measure of $\angle C$?
Hint: The sum of the measures of the angles of a triangle is 180°.

A. 47°
B. 86°
C. 94°
D. 133°
E. 143°

17. The rectangular backyard of a house measures 130 feet by 70 feet. If the backyard is completely fenced in, what is the length, in feet, of the fence?

A. 130
B. 140
C. 200
D. 260
E. 400

18. What is the perimeter of a regular hexagon with a side of length 11?
Hint: A regular hexagon has 6 sides of equal length.

A. 33
B. 44
C. 66
D. 72
E. 96

19. A room has a rectangular floor that is 15 **feet** by 21 **feet**. What is the area of the floor in square **yards**? Hint: 3 feet = 1 yard

A. 24
B. 35
C. 36
D. 105
E. 144

20. What is the total cost of 2.5 pounds of bananas at \$0.34 per pound and 2.5 pounds of tomatoes at \$0.66 per pound?

A. \$1.00
B. \$2.40
C. \$2.50
D. \$3.50
E. \$5.00

21. Kaya ran $1\frac{2}{5}$ miles on Monday and $2\frac{1}{3}$ miles on Tuesday. What was the total distance, in miles, Kaya ran during those two days?

A. $3\frac{2}{15}$
B. $3\frac{3}{8}$
C. $3\frac{2}{5}$
D. $3\frac{7}{15}$
E. $3\frac{11}{15}$

22. Holly has \$100 available to buy USB drives to back up data for her business computers. Each USB drive has a price of \$8, and Holly will pay a sales tax of 7% of the total price of the USB drives. What is the maximum number of USB drives Holly can buy?

A. 11
B. 12
C. 13
D. 14
E. 15

23. The surface of a rectangular table has an area of 100 square feet and a width of 5 feet. What is the length, in feet, of the surface?

A. 10
B. 15
C. 20
D. 95
E. 100

24. The cost of a gym membership is a one-time fee of \$140, plus a monthly fee of \$40. Brendan wrote a \$500 check to pay his gym membership for a certain number of months, including the one-time fee. How many months of membership did he pay for?

A. 3
B. 4
C. 9
D. 12
E. 13

25. Of the people who went to see a movie, 65% were over 18. What fraction of the people who went to see the movie were over 18?

A. $\frac{7}{10}$
B. $\frac{13}{20}$
C. $\frac{6}{13}$
D. $\frac{7}{20}$
E. $\frac{3}{10}$

Answer Key

1. E
2. E
3. D
4. A
5. D
6. B
7. B
8. B
9. A
10. B

11. A
12. D
13. C
14. C
15. A
16. D
17. E
18. C
19. B
20. C

21. E
22. A
23. C
24. C
25. B