

Dear Parents and Guardians,

This summer, students are expected to complete the **End-of-Year Test** as their Summer Math Assignment.

Purpose of the Assignment

- Review and reinforce the math skills learned this year.
- Prevent summer learning loss. Studies show that students who do no academic work over the summer can lose up to 40% of their academic gains from the school year.
- Prepare students for the expectations of next year's math course.
- Identify areas that may need additional practice.

How to Complete the Assignment

- Work independently and show all steps in solving problems.
- Take time to carefully solve and check each problem.
- Focus on understanding the process, not just finding the answer.
- Complete the assessment over multiple sessions rather than all at once.

Resources for Support

If a problem is difficult, students should refer to:

- Class notes and study guides.
- Online resources such as Khan Academy or IXL.

When to Complete the Assignment

- Complete the assessment during the summer.
- Have it ready to submit on the first day of school.

Math Fact Fluency

- Students are expected to have mastered the basic math facts taught in previous grades, including addition, subtraction, multiplication, and division. Fluency with these facts is essential for success in higher-level mathematics. Families are encouraged to review math facts regularly throughout the summer to help students maintain these important skills.

Thank you for supporting your child's continued mathematical growth. Consistent practice over the summer will help ensure a strong start to the new school year.

Sincerely,

The Math Department

Holy Spirit School

Name _____

Circle the best answer.

1. Simplify.

$$\frac{10 - (-6)}{2(-4)}$$

A. 8

B. -2

C. $\frac{1}{2}$

D. 2

2. Simplify.

$$-4(2^3 - 9) + 5(4^2) \div 4$$

F. 20

G. 21

H. 24

J. 32

3. Solve.

$$x - 51 = -29$$

A. $x = -80$

B. $x = -22$

C. $x = 22$

D. $x = 80$

4. Solve.

$$\frac{m}{3} + 9 = 21$$

F. $m = 4$

G. $m = 10$

H. $m = 36$

J. $m = 90$

5. Given $A = \ell w$, what is the length of a rectangle with an area of 99 ft^2 and a width of 3 ft?

A. 11 ft

B. 33 ft

C. 96 ft

D. 297 ft

6. Which inequality describes the graph?



F. $x \leq -2$

G. $x < 2$

H. $x \geq -2$

J. $x > -2$

7. Solve.

$$\frac{n}{-8} > 24$$

A. $n > -192$

B. $n > -3$

C. $n < -3$

D. $n < -192$

8. Which decimal is equivalent to $\frac{4}{5}$?

F. 0.9

G. 0.8

H. 0.4

J. 0.2

9. Simplify.

$$4^{-2} \cdot 4^{-1}$$

A. $\frac{1}{64}$

B. $\frac{1}{16}$

C. 4

D. 64

10. Solve.

$$56.5 = 10x + 30$$

F. 2.65

G. 8.65

H. 16.5

J. 53.5

11. Evaluate $a - b + (c - a)$ when $a = \frac{1}{2}$, $b = \frac{-1}{3}$, $c = \frac{3}{4}$.

A. $\frac{5}{12}$ B. $\frac{5}{24}$
C. $\frac{13}{24}$ D. $1\frac{1}{12}$

16. Triangle XYZ is similar to triangle PQR . $\overline{XY}$ is 7 cm, $\overline{PQ}$ is 10 cm, and $\overline{PR}$ is 12 cm. What is the length of $\overline{XZ}$?

F. 5.8 cm G. 8.4 cm
H. 17.1 cm J. not given

12. Simplify.

$$\frac{3}{4} + 2.125 \cdot \left(-3 \div \frac{1}{6}\right)$$

F. -51.75 G. -37.5
H. -1.4375 J. -0.3125

17. At Dewey Middle School, 45 students out of 250 have red hair. What percent of students do not have red hair?

A. 4.5% B. 18%
C. 45% D. 82%

13. Solve.

$$2\frac{2}{5}x \div \frac{1}{4} = 18$$

A. $x = 1\frac{7}{8}$ B. $x = 10\frac{4}{5}$
C. $x = 30$ D. $x = 172\frac{8}{10}$

18. What is the percent of increase from 60 to 195? If necessary, round to the nearest tenth of a percent.

F. 30.8% G. 69.2%
H. 225% J. 325%

14. Which is the best buy?

F. 9 oz for \$.59
G. 12 oz for \$.80
H. 20 oz for \$1.30
J. 25 oz for \$1.50

19. The high temperatures for the week were 87°F, 95°F, 98°F, 92°F, 82°F, 99°F, and 98°F. What is the mean of this data?

A. 92°F
B. 93°F
C. 95°F
D. 98°F

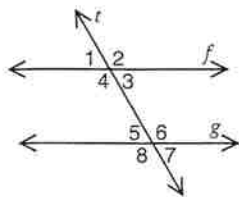
15. Julie creates a diagram of her room. She uses a scale in which 1 inch = 3 feet. If the actual length of her art table is 4.5 feet, how long is it on her map?

A. $\frac{1}{2}$ in.
B. $1\frac{1}{4}$ in.
C. $1\frac{1}{2}$ in.
D. 2 in.

20. Which situation describes a relationship with a positive correlation?

F. amount spent and amount saved
G. number of players and number of uniforms needed
H. test scores and temperature
J. distance traveled and car size

21. Line f is parallel to line g . If the measure of $\angle 3$ is 55° , what is the measure of $\angle 6$?



- A. 45° B. 55°
C. 125° D. 305°

26. In 25 trials, a 1–6 number cube lands on 6 ten times. How many times can it be expected to land on 6 in 150 trials?

- F. 6 G. 10
H. 40 J. 60

22. What is the measure of one interior angle of a regular pentagon?

- F. 108° G. 120°
H. 540° J. not given

27. A pound of beans costs \$2.19. What is the function that represents the relationship between weight (x) and cost (y)?

- A. $x = 2.19$ B. $y = x + 2.19$
C. $y = 2.19x$ D. $y = 2.19x + 1$

23. What is the area of a triangle with a base of 6.9 meters and a height of 10 meters?

- A. 16.9 m^2
B. 23 m^2
C. 34.5 m^2
D. 69 m^2

28. Which does not represent a linear function?

- F. $y = 2x - 10$
G. $y = 3$
H. $\{(0, 1), (-2, 5), (1, 2)\}$
J. $\{(-7, 4), (-3, -4), (5, -20)\}$

24. What is the area of a circle with a diameter of 5 inches? Use 3.14 for π .

- F. 7.85 in.^2 G. 15.7 in.^2
H. 19.625 in.^2 J. 78.5 in.^2

29. Evaluate the expression for $a = -5$, $b = 2$, $c = 1$, and $d = -3$.

$$(ac) + b^2d^3 - 19$$

- A. -132 B. -122
C. 60 D. 84

25. What is the surface area of a rectangular prism that is 3.5 cm long, 10 cm wide, and 7 cm high?

- A. 41 cm^2
B. 129.5 cm^2
C. 245 cm^2
D. 259 cm^2

30. Simplify.

$$(6a)(a^2) + (2a^3 - 4a^2 + 2) - (-2a^2)$$

- F. $8a^3 - 2a^2 + 2$
G. $8a^6 - 2a^2 + 2$
H. $8a^6 - 6a^2 + 2$
J. $8a^6 - 6a^4 + 2$

31. Everyone on the soccer team brought at least one item for a snack. Six players brought apples and seven brought granola bars. Of all the players, four brought an apple and a granola bar. How many players are on the team? (*Hint: Use a Venn diagram.*)

- A. 17 B. 13
C. 9 D. 7

36. Audrey picks two cards from a pile, without replacing the first. The pile contains 2 red cards, 5 blue cards, and 3 green cards. What is $P(\text{blue, then red})$?

- F. $\frac{1}{10}$ G. $\frac{1}{9}$
H. $\frac{1}{4}$ J. $\frac{7}{10}$

32. The size of a TV is described by the length of the diagonal from one corner of the screen to another. What is the width of a 40-inch television screen that has a height of 24 inches?

- F. 16 in. G. 24 in.
H. 32 in. J. 46.6 in.

37. In order to explain triangles to your brother, you break a stick into three pieces. One piece is 8 cm and another is 16 cm in length. Which could be the length of the other piece?

- A. 3 cm B. 8 cm
C. 10 cm D. 25 cm

33. Eliot sells a motorbike for \$4500 and earns a \$279 commission. What is his commission rate?

- A. 0.062% B. 6.2%
C. 6.6% D. 93.8%

38. Jasmine paints her room two colors. Her choices are orange, green, red, and blue. How many combinations could she use?

- F. 24 G. 12
H. 6 J. 4

34. It costs \$4.99 for a pumpkin and \$1.69 per pound for peaches. What function shows the total cost (y) for one pumpkin and x pounds of peaches?

- F. $y = 6.68$
G. $y = 6.68x$
H. $y = 1.69x + 4.99$
J. $y = 4.99x + 1.69$

39. A rectangle is $2x$ feet long and has an area of $6x^3 + 2x^2 + 10x$ square feet. What is the width?

- A. $3x^2 + x + 5$
B. $3x^3 + x^2 + 5x$
C. $3x^3 + x^2 + 10x$
D. $12x^4 + 4x^3 + 20x^2$

35. Jim's cylindrical container can hold 942 cubic inches of water. If the cylinder's radius is 5 inches, what is its height? Use 3.14 for π .

- A. 3 in. B. 12 in.
C. 30 in. D. 60 in.

40. Ike's class is presenting a play. It costs \$125 to rent the space. Programs cost \$1.50 each to print. The students make \$4 for each program they sell. How many programs must be sold for the total cost to be equal to what they make?

- F. 23 G. 32
H. 50 J. 84