

8 Xavier Summer 2026 Math Packet

Name: Answer Key

Complete the following problem. Show all your work and circle your final answer. Please bring this packet with you on the first day of school.

Decimals

Find the sum, difference, product or quotient.

1) $3.7 + 2.81 = 6.51$

2) $9.3 - 2.46 = 6.84$

3) $(4.01)(2.2) = 8.822$

4) $36.5 \div .5 = 73$

Fractions

Find the sum, difference, product or quotient.

5) $\frac{2}{3} + 6\frac{4}{5} = 7\frac{7}{15}$

6) $3\frac{3}{4} + 2\frac{3}{8} = 6\frac{1}{8}$

7) $6\frac{1}{6} - \frac{1}{4} = 5\frac{11}{12}$

8) $4\frac{1}{4} - 3\frac{1}{3} = \frac{11}{12}$

9) $\frac{4}{5} \cdot 2\frac{1}{2} = 2$

10) $1\frac{1}{5} \cdot 2\frac{1}{3} = 2\frac{4}{5}$

11) $\frac{2}{7} \div 4 = \frac{1}{14}$

12) $3\frac{1}{8} \div \frac{1}{6} = 18\frac{3}{4}$

Integers

Find the sum, difference, product or quotient.

$$13) -15 + 22 = 7$$

$$14) 4 + (-13) = -9$$

$$15) -8 + (-5) = -13$$

$$16) -8 - 6 = -14$$

$$17) 20 - (-5) = 25$$

$$18) -3 - (-11) = 8$$

$$19) (-9)(8) = -72$$

$$20) (-7)(-6) = 42$$

$$21) (9)(-3) = -27$$

$$22) -36 \div (-9) = 4$$

$$23) -45 \div 5 = -9$$

$$24) 54 \div (-6) = -9$$

Order of Operations

$$25) 3 + 6(4 - 2) = 15$$

$$26) (5 + 3)^2 - 16 \div 2 = 56$$

$$27) 48 \div 4 (2 + 1) = 36$$

Expressions

Evaluate the expression. Let $x = -2$ and $y = 4$. Show your substitutions.

28) $2x + 3y = 8$

29) $x^2 - y = 4$

30) $5(x + y) = 10$

Combining Like Terms

Simplify each expression

31) $3x + 4y - 7x + 2y = -4x + 6y$

32) $6x^2 + 4x + 8x^2 - 2x = 14x^2 + 2x$

33) $2xy + 6x - 8y + 12xy = 14xy + 6x - 8y$

34) $7 - 6x + 7xy - 6y + 6 = 7xy - 6x - 6y + 13$

Distributive Property

Simplify each expression and combine like terms when possible

35) $4(x + 7) = 4x + 28$

36) $5x(6x + 11y) = 30x^2 + 55xy$

37) $2(x^2 + 8) - 4x(x + 9) = 2x^2 - 36x + 16$

Greatest Common Factor

Simplify each expression.

38) $24x + 15 = 3(8x + 5)$

39) $6x^2 - 8x + 2 = 2(3x^2 - 4x + 1)$

40) $12x^2y - 18xy = 6xy(2x - 3)$

Exponents

Write each expression with only positive exponents.

41) $3^2 \cdot 3^3 = 3^5$

42) $(2^3)^2 = 2^6$

43) $\frac{4^5}{4^2} = 4^3$

Geometry Basics

44) Find the area and perimeter of a square with side length of 7 cm.

$$\text{Area} = 49 \text{ cm}^2$$

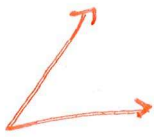
$$\text{Perimeter} = 28 \text{ cm}$$

45) Find the area of a triangle with base 12 inches and height 8 inches.

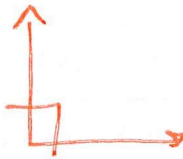
$$A = 48 \text{ in}^2$$

Draw an example.

46) An acute angle



47) A right angle



48) An obtuse angle



Coordinate Plane

49) Identify the quadrant for each point.

a) (3, -2) IV b) (-4, 5) II

c) (2, 7) I d) (-6, -1) III

50) Given the coordinates of a point that is on the x-axis.

(x-intercept, 0)

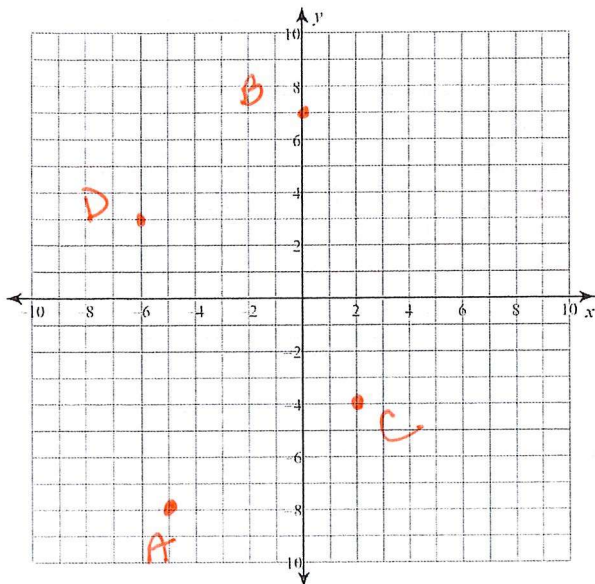
51) Give the coordinates of a point that is on the y-axis.

(0, y-intercept)

52) Plot and label the points.

A: (-5, -8) B: (0, 7)

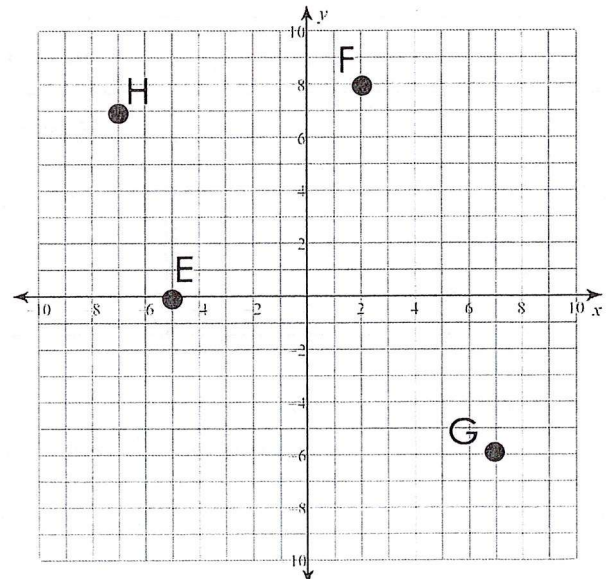
C: (2, -4) D: (-6, 3)



53) State the coordinates.

E: (-5, 0) F: (2, 8)

G: (7, -6) H: (-7, 7)



Word Problems

54) Sarah has \$120. She spends x dollars each day. Write an expression to represent how much money she has left after 5 days.

$$120 - 5x$$

55) A rectangle's length is 4 times its width. Write an equation to find the perimeter if the width is represented by w .

$$2(w + 4w)$$

56) Colin spent half of his weekly allowance playing mini-golf. To earn more money, his parents let him wash the car for \$10. What is his weekly allowance if he ended with \$16?

12 dollars

57) Paul rented a bike. It cost \$12 plus \$6 per hour. Paul paid \$42 for the rental. How many hours did Paul have the bike?

5 hours

58) Margaret was given \$17 for her birthday. She now has \$22. How much money did she start with?

5 dollars

59) A frame is 3 inches tall and 4 inches wide. If it is enlarged to a height of 12 inches, how wide will it be?

16 inches

Which section was the easiest?

Which section was the most challenging?

