



Summer Packet for Students Entering Foundations of Algebra

Welcome to Foundations of Algebra.

You are expected to have a strong background in the skills reviewed in this packet.

Resource links are embedded within each section throughout the packet. This packet will be checked for completion and entered as formative Infinite Campus grade.

DUE: 1st week of school.

Need help on some of the topics? For each section a link to an instructional video has been provided!

Have a great summer and see you in the fall! 😊

Order of Operations: <https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-arithmetic-operations/cc-6th-order-of-operations/v/order-of-operations-1>

Simplify:

1) $15 + 2 - 8$

2) $4 \cdot 5 - 8$

3) $(10 + 2) \div 4$

4) $2 - 6 \cdot 3$

Converting Fractions: <https://www.khanacademy.org/math/cc-fourth-grade-math/imp-fractions-2/imp-mixed-numbers/v/changing-a-mixed-number-to-an-improper-fraction>

Convert from a mixed number to an improper fraction:

5) $2\frac{1}{4}$

6) $1\frac{2}{3}$

7) $3\frac{3}{4}$

8) $2\frac{4}{5}$

Simplifying Fractions: <https://www.khanacademy.org/math/arithmetic-home/arith-review-fractions/visualizing-equiv-frac/e/simplifying-fractions>

Simplify:

9) $\frac{8}{20}$

10) $\frac{50}{10}$

11) $\frac{60}{18}$

12) $\frac{150}{20}$

Solving One Step Equations: <https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-equations-and-inequalities/cc-6th-one-step-add-sub-equations/e/one-step-equations>

<https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-equations-and-inequalities/cc-6th-one-step-mult-div-equations/e/linear-equations-1>

Solve for x:

13) $x - 8 = 3$

14) $3x = 18$

15) $\frac{x}{4} = 5$

16) $x + 10 = 15$

Combine Like Terms:

<https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-expressions-and-variables/cc-6th-combining-like-terms/e/combining-like-terms-0.5>

Simplify by Combining Like Terms:

17) $3x + 2x + 4$

18) $-5x + 2 + 4x$

19) $2 + 8x - 6x$

Distributive Property: <https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-expressions-and-variables/cc-6th-distributive-property/e/distributive-property-with-variables>

Simplify using the distributive property:

20) $3(x - 2)$

21) $2(3x + 1)$

22) $5(3 - 2x)$

Plotting Points:

<https://www.khanacademy.org/math/cc-fifth-grade-math/imp-geometry-3/imp-intro-to-the-coordinate-plane/e/identify-coordinates>

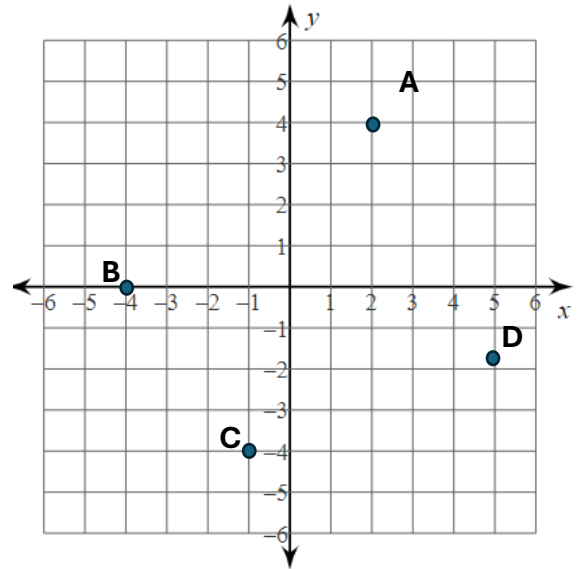
Identify the coordinates of all the points in the graph:

23) Point A: _____

24) Point B: _____

25) Point C: _____

26) Point D: _____



Factoring Numbers:

<https://www.khanacademy.org/math/cc-fourth-grade-math/imp-factors-multiples-and-patterns/imp-factors-and-multiples/v/finding-factors-of-a-number>

List all the factor pairs for the following numbers:

27) 18

28) 30

29) 75

30) 66

Answers:

1) 9

2) 12

3) 3

4) -16

5) $\frac{9}{4}$

6) $\frac{5}{3}$

7) $\frac{15}{4}$

8) $\frac{14}{5}$

9) $\frac{2}{5}$

10) 5

11) $\frac{10}{3}$

12) $\frac{15}{2}$

13) $x = 11$

14) $x = 6$

15) $x = 20$

16) $x = 5$

17) $5x + 4$

18) $-x + 2$

19) $2 + 2x$

20) $3x - 6$

21) $6x + 2$

22) $15 - 10x$

23) Point A: (2, 4)

24) Point B: (-4, 0)

25) Point C: (-1, -4)

26) Point D: (5, -2)

27) 1 & 18, 2 & 9, 3 & 6

28) 1 & 30, 2 & 15, 3 & 10, 5 & 6

29) 1 & 75, 3 & 25, 5 & 15

30) 1 & 66, 2 & 33, 3 & 22, 6 & 11