

Algebra 1 Summer Assignment – Online Tutorials and Practice

Complete the assignment and bring to math class on the first day of school. You may use Khan Academy at www.khanacademy.org for online tutorials and www.ixl.com for extra practice.

Online Tutorials on www.khanacademy.org

Click on the links below for a tutorial.

Greatest Common Factor: <https://www.khanacademy.org/math/pre-algebra/factors-multiples/greatest-common-divisor/v/greatest-common-divisor-factor-exercise>

Least Common Multiple: <https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-factors-and-multiples/cc-6th-lcm/v/least-common-multiple-exercise>

Operations with Integers: <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-negative-numbers-add-and-subtract/cc-7th-add-and-sub-integers/e/integer-addition-and-subtraction-2>

Rational Numbers: <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-fractions-decimals/cc-7th-add-sub-rational-numbers/v/comparing-rational-numbers>

Operations with Rational Numbers:

<https://www.khanacademy.org/math/pre-algebra/decimals-pre-alg/dec-perc-frac-pre-alg/v/adding-and-subtracting-a-decimal-percentage-and-fraction>

<https://www.khanacademy.org/math/pre-algebra/fractions-pre-alg/fractions-unlike-denom-pre-alg/v/adding-fractions-with-10-and-100-as-denominators>

Solve Proportions: <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-ratio-proportion/cc-7th-write-and-solve-proportions/v/find-an-unknown-in-a-proportion>

Solve Proportions Word Problems:

<https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-ratio-proportion/cc-7th-write-and-solve-proportions/v/find-an-unknown-in-a-proportion-2>

Percents: <https://www.khanacademy.org/math/algebra-basics/core-algebra-foundations/algebra-foundations-decimal-operations/v/another-percent-word-problem>

Perimeter and Area: <https://www.khanacademy.org/math/algebra-basics/core-algebra-foundations/copy-of-perimeter-area-tutorial>

Surface Area: <https://www.khanacademy.org/math/basic-geo/basic-geo-volume-surface-area/basic-geo-surface-area>

Volume: <https://www.khanacademy.org/math/pre-algebra/measurement/volume-introduction-rectangular/v/how-we-measure-volume>

Evaluate Variable Expressions:

<https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-expressions-and-variables/cc-6th-evaluating-expressions/v/variables-and-expressions-1>

Combine Like Terms: <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-manipulating-expressions/v/combining-like-terms>

Solve One Step Equations: <https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-equations-and-inequalities/cc-6th-one-step-mult-div-equations/v/simple-equations>

<https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-equations-and-inequalities/cc-6th-one-step-add-sub-equations/v/adding-and-subtracting-the-same-thing-from-both-sides>

Solve Two Step Equations:

<https://www.khanacademy.org/math/algebra-basics/core-algebra-linear-equations-inequalities/core-algebra-solving-basic-equations/v/equations-2>

Go to next page for a list of www.ixl.com practice topics.

Additional online practice www.ixl.com

Log in with your school given logon id and password that you have been using for the past 2 years.

Eighth Grade - Pre-Algebra

A.5 – Greatest Common Factor

A.6 – Least Common Multiple

C.1 – C.9 – Operations with Integers

D.1 – D.8 – Rational Numbers (Fractions)

E.1 – E.10 – Operations with Rational Numbers (Fractions)

H.8 – Solve Proportions

H.9 – Solve Proportions Word Problems

J.1 – J.11 – Percents

Q.14 – Perimeter (2-D shapes)

Q.15 – Q.17 – Area (2-D shapes)

Q.26 – Q.27 – Surface Areas of Solids (3-D figures)

Q.28 – Q.30 – Volume of Solids (3-D shapes)

T.4 – T.4 – Evaluate Variable Expressions

T.6 – Combine Like Terms

U.4 – U.5 – Solve one & Two Step Linear Equations

Name: _____ Date: _____

Algebra 1 - Summer Assignment

1. What is the value of *? $\frac{6}{8} = \frac{*}{24}$

[A] 6

[B] 18

[C] 144

[D] 24

2. Write $4\frac{3}{4}$ as an improper fraction.

[A] $\frac{43}{4}$

[B] $\frac{19}{4}$

[C] $\frac{4}{19}$

[D] $\frac{4}{43}$

3. Write $\frac{38}{7}$ as a mixed number.

[A] $1\frac{5}{7}$

[B] $1\frac{6}{7}$

[C] $5\frac{7}{3}$

[D] $5\frac{3}{7}$

4. Multiply: $\frac{6}{5} \times \frac{5}{9}$

[A] $4\frac{1}{6}$

[B] $\frac{2}{3}$

[C] 1

[D] $\frac{11}{14}$

5. Divide: $2\frac{2}{7} \div 3\frac{3}{4}$

[A] $\frac{8}{21}$

[B] $\frac{3}{14}$

[C] $\frac{64}{105}$

[D] $8\frac{4}{7}$

6. Find the LCD: $\frac{3}{7}, \frac{10}{21}, \frac{1}{6}$

[A] 84

[B] 42

[C] 21

[D] 126

7. Add: $4\frac{1}{4} + 1\frac{1}{9}$

[A] $5\frac{2}{13}$

[B] 6

[C] $8\frac{3}{13}$

[D] $5\frac{13}{36}$

8. Subtract: $9 - 4\frac{1}{2}$

[A] $8\frac{1}{2}$

[B] $4\frac{1}{2}$

[C] $5\frac{1}{2}$

[D] $13\frac{1}{2}$

9. Simplify. $\left(\frac{2}{5} + \frac{1}{2}\right) \div \frac{1}{6}$

[A] $5\frac{2}{5}$

[B] $\frac{9}{20}$

[C] $\frac{3}{20}$

[D] $\frac{4}{15}$

10. Find the greatest common factor of 4 and 6.

[A] 4

[B] 2

[C] 3

[D] 1

11. Find the least common multiple of 20, 44, and 88.

[A] 880

[B] 220

[C] 440

[D] 330

12. Round 2.327 liters to the nearest tenth of a liter.

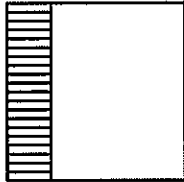
[A] 2.33 L

[B] 2.4 L

[C] 2.3 L

[D] 2.34 L

13. Write a decimal to estimate the amount of area shaded.



[A] 2.5

[B] 0.75

[C] 0.25

[D] 0.5

14. Write 0.45 as a reduced fraction.

[A] $\frac{45}{100}$

[B] $\frac{3}{10}$

[C] $\frac{9}{20}$

[D] $\frac{4}{5}$

15. Add: $7.92 + 5.95 + 7.54$

[A] 21.41

[B] 21.42

[C] 21.51

[D] 22.41

16. Solve: $x + 2.2 = 6.3$

- [A] 4.1 [B] 13.86 [C] 8.5 [D] 3.1

17. Simplify: $53.8 - 4.8 \cdot 0.21$

- [A] 10.29 [B] 10.311 [C] 52.792 [D] 51.792

18. Solve: $2.4 = 0.8y$

- [A] 3 [B] 4 [C] 0.3 [D] 19.2

19. Complete: 16 in. = _____ ft

- [A] 192 [B] $5\frac{1}{3}$ [C] $2\frac{2}{3}$ [D] $1\frac{1}{3}$

20. Complete: 50.4 mm = _____ cm

- [A] 5040 [B] 5.04 [C] 504 [D] 0.504

21. Convert 10 inches to centimeters.

- [A] 0.39 cm [B] 25.40 cm [C] 3.94 cm [D] 254.00 cm

22. Write the following phrase as a rate in lowest terms.

210 sales for 154 returns

- [A] $\frac{11 \text{ sales}}{15 \text{ returns}}$ [B] $\frac{15 \text{ sales}}{11 \text{ returns}}$ [C] $\frac{210 \text{ returns}}{154 \text{ sales}}$ [D] $\frac{30 \text{ returns}}{22 \text{ sales}}$

23. Which of the following is NOT equal to the ratio 12 to 20?

- [A] $\frac{5}{3}$ [B] 9:15 [C] $\frac{3}{5}$ [D] 3:5

24. Solve: $\frac{3}{6} = \frac{x}{24}$

- [A] 5 [B] 12 [C] 9 [D] 17

25. If 4 cans of apricots cost \$17.20, how many cans of apricots can be purchased with \$38.70?

- [A] 11 [B] 8 [C] 9 [D] 10

26. Write $2\frac{1}{4}\%$ as a decimal.

- [A] 0.0225 [B] 225 [C] 0.225 [D] 2.25

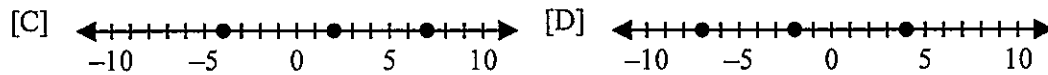
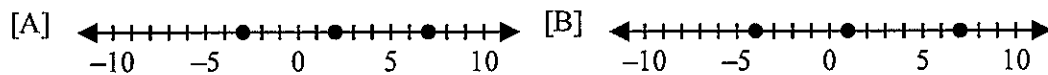
27. The regular price of a suit is \$105. It is on sale at 28% off. What is the sale price?

- [A] \$77.00 [B] \$75.60 [C] \$29.40 [D] \$28.00

28. What percent of 5 is 1?

- [A] $\frac{1}{20}\%$ [B] 0.2% [C] 5% [D] 20%

29. Which of the following number lines shows the graph of 7, 2, and -4 ?



30. Add: $(-6) + 4 + (-6)$

- [A] -8 [B] -4 [C] 8 [D] 16

31. Solve: $x - 2 = 6$

- [A] 4 [B] -4 [C] -8 [D] 8

32. Multiply: $(-3)(7)(-6)$

- [A] 126 [B] 2 [C] -2 [D] -126

33. Simplify: $(-10)^2$

- [A] -100 [B] 100 [C] -20 [D] 20

34. Simplify: $(18 + 7 \cdot 18 \div 7 - 15) \div 7$

- [A] 11 [B] -4 [C] 3 [D] 449

35. Simplify: $4x + 5(x + 4)$

[A] $-x + 20$ [B] $9x + 20$ [C] $9x + 4$ [D] $9x - 20$

36. Subtract: $(-7) - (-4)$

[A] -11 [B] -3 [C] 3 [D] 11

37. Simplify: $-(-5) - 5(9 - 8)$

[A] -32 [B] -10 [C] 0 [D] -58

38. Evaluate $a - b + c$ if $a = -7$, $b = -1$, and $c = -4$.

[A] -12 [B] -10 [C] -4 [D] -2

39. Evaluate $\frac{y}{2x} - z$ for $x = 2$, $y = 16$, and $z = 1$.

[A] 3 [B] 9 [C] -6 [D] 5

40. Multiply: $-4(x + 2)$

[A] $-4x + 8$ [B] $-4x - 2$ [C] $-4x - 8$ [D] $-4x + 2$

41. Simplify: $4x - 8y - 9x - 7y$

[A] $-5x - 15y$ [B] $13x - 15y$ [C] $-5x + y$ [D] $13x + y$

42. Which of the following is a solution of the equation $6x - 5 = -6$?

[A] -11 [B] -1 [C] $-\frac{1}{6}$ [D] $-\frac{11}{6}$

43. Solve: $5x - 3 = 37$

[A] 34 [B] 7 [C] 8 [D] 3

44. Solve: $\frac{x}{7} - \frac{x}{8} = 2$

[A] 1 [B] 56 [C] $7\frac{7}{15}$ [D] 112

45. Solve for s : $-6 = t + 5s$

- [A] $s = -6 - t - 5$ [B] $s = \frac{-6-t}{5}$ [C] $s = \frac{6+t}{5}$ [D] $s = -6 - 5t$

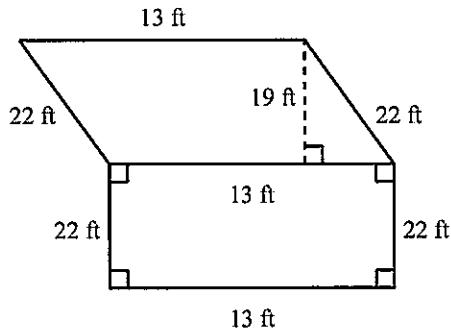
46. One side of a parallelogram has a length of 5.3 yards while another side has a length of 80.7 yards. What is the perimeter of the parallelogram?

- [A] 427.71 yd [B] 172 yd [C] 91.3 yd [D] 86 yd

47. Find the circumference of a circle whose radius is 3 inches. (Use $\pi \approx 3.14$)

- [A] 9.42 in. [B] 1.047 in. [C] 2.093 in. [D] 18.84 in.

48. Find the area of the region shown.

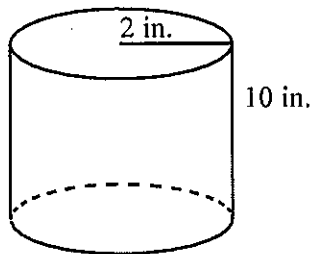


- [A] 114 ft² [B] 704 ft² [C] 533 ft² [D] 572 ft²

49. Find the volume of a cube 5 inches on each side.

- [A] 30 in.³ [B] 15 in.³ [C] 125 in.³ [D] 25 in.³

50. Find the volume of the circular cylinder. (Use $V = \pi r^2 h$; $\pi \approx 3.14$)



- [A] 62.8 in.² [B] 125.6 in.³ [C] 125.6 in.² [D] 62.8 in.³