

Algebra Skills Needed For Geometry.

Complete all work on another piece of paper. Make sure to rewrite each question on your own paper.

Day 1

Solving simple equations.

1.) $3x - 4 = 9$ 2.) $2x + 4 = 18$ 3.) $-3x + 1 = 9$

Solving equations with a variable on both sides.

4.) $2x + 1 = 3x + 8$ 5.) $-5x + 8 = 12x - 4$ 6.) $3x + 1 = x + 1$

Solving multiple step equations.

7.) $2(3x - 3) = 4$ 8.) $2(x - 4) = 3(2x + 1)$ 9.) $3(2x + 1) - 3 = 4x + 4$

Clearing decimals

10.) $0.3x + 2 = 1.2$ 11.) $1.2x - 4 = 2.1$ 12.) $3.2x - 1 = 3.8x + 2$

Clearing fractions.

13.) $\frac{2}{3}x - 4 = 5$ 14.) $\frac{1}{2}x - \frac{3}{4} = \frac{1}{2}$ 15.) $\frac{2}{3} - 4 = \frac{3}{4}x - \frac{1}{2}$

Solving Proportions

16.) $\frac{4}{x} = \frac{3}{8}$ 17.) $\frac{x-1}{2} = \frac{x+2}{3}$ 18.) $\frac{2}{3} = \frac{x-1}{x+3}$

Day 2

Radicals

Simplify

1.) $\sqrt{8}$ 2.) $\sqrt{12}$ 3.) $\sqrt{18}$ 4.) $\sqrt{24}$
5.) $\sqrt{80}$ 6.) $\sqrt{32}$ 7.) $\sqrt{20}$ 8.) $\sqrt{44}$
9.) $\sqrt{56}$ 10.) $\sqrt{88}$

Multiplying

11.) $\sqrt{8} \cdot \sqrt{10}$

12.) $\sqrt{12} \cdot \sqrt{6}$

13.) $\sqrt{15} \cdot \sqrt{10}$

14.) $\sqrt{22} \cdot \sqrt{33}$

Rationalize the denominator.

15.) $\sqrt{\frac{1}{3}}$

16.) $\sqrt{\frac{3}{5}}$

17.) $\sqrt{\frac{1}{2}}$

Add the following.

18.) $\sqrt{5} + 3\sqrt{5}$

19.) $\sqrt{8} + \sqrt{18}$

20.) $3\sqrt{12} + \sqrt{27}$

Day 3

Solving quadratics by factoring $ax^2 + bx + c = 0$

1.) $x^2 - 3x = 0$

2.) $5x^2 - 15x = 0$

3.) $4x^2 - 2x = 8x$

4.) $x^2 - 3x - 4 = 0$

5.) $x^2 + 11x + 24 = 0$

6.) $x^2 - 3x + 7 = 5$

7.) $x^2 - 5x = 3x - 12$

8.) $3x^2 + 4x - 4 = 0$

Solving quadratics by isolating x^2 and then taking the square root of both sides.

9.) $x^2 - 10 = 0$

10.) $2x^2 - 12 = 0$

11.) $3x^2 = 2x^2 + 9$

Solving quadratics using the quadratic formula.

12.) $x^2 - 2x - 7 = 0$

13.) $2x^2 - 5x - 4 = 0$

14.) $x^2 - 4x + 12 = 0$

15.) $2x^2 + 2x = 5x^2 - 12$

16.) Find the dimensions of a rectangle whose width is 5 inches less than the length and whose area is 36 in².

Complete all work on the following paper. Put your final answer(s) on the answer sheet.

Solve the following.

1.) $3x - 2 = 16$

2.) $3x - 6 = 5x + 18$

3.) $4(2x-3) + 6 = 7x - 5$

4.) $\frac{2}{3}x - \frac{1}{2} = 4$

5.) $0.2x - 3 = 1.8$

6.) $\frac{x-1}{2} = \frac{2x+3}{5}$

7.) $3x^2 - 6x = 0$

8.) $2x^2 - 4 = x^2$

9.) $x^2 - 5x + 4 = 0$

$$10.) x^2 + 6x - 16 = 0$$

$$11.) 2x^2 - 9x - 5 = 0$$

$$12.) x^2 - 8 = 0$$

Solve the following by using the quadratic formula.

(2 point question) : 1 point for setting up the quadratic formula correctly. 1 point for simplifying.

$$13.) 3x^2 - 2x - 7 = 0$$

Simplify the following.

$$14.) \sqrt{24}$$

$$15.) \sqrt{12} \cdot \sqrt{6}$$

$$16.) \sqrt{18} + 3\sqrt{8}$$

Rationalize the denominator.

17.) $\sqrt{\frac{2}{5}}$

18.) The area of a rectangle is 32 cm^2 . The length of the rectangle is 4 more than the width. Find the dimensions of this rectangle. You must write an equation and solve it to receive credit.

(4 point question) 1 point drawing a correct figure

1 point for setting up a correct equation

1 point for solving equation correctly

1 point for labeling answer.

Common Assessment Answer Sheet Name _____

1.) _____

10.) _____

2.) _____

11.) _____

3.) _____

12.) _____

4.) _____

13.) Initial Equation _____

5.) _____

Simplified _____

6.) _____

14.) _____

7.) _____

15.) _____

8.) _____

16.) _____

9.) _____

17.) _____

18.) Picture

Equation _____

Dimensions _____

