

# Algebra I

## 8.4 Worksheet

### Positive and Negative Square Roots

NAME: \_\_\_\_\_

DATE: \_\_\_\_\_ HOUR: \_\_\_\_\_

Solve each quadratic equation. (Hint: each problem will have **two** solutions.) Show all your work.

1.  $x^2 = 4$

$$x = \pm \sqrt{4}$$

$$x = \pm 2$$

2.  $x^2 = 9$

3.  $x^2 = 64$

4.  $x^2 = 1$

5.  $x^2 = 25$

6.  $x^2 = 49$

7.  $x^2 = 400$

8.  $x^2 = 36$

$$x = \pm \sqrt{25}$$

$$x = \pm 5$$

9.  $x^2 = 16$

10.  $x^2 = 81$

11.  $x^2 = 100$

12.  $x^2 = 121$

13.  $x^2 = 144$

14.  $x^2 = 169$

15.  $x^2 = 196$

16.  $x^2 = 225$

17.  $2x^2 = 8$

18.  $\frac{3x^2}{3} = \frac{27}{3}$

19.  $4x^2 = 400$

20.  $-x^2 = -4$

$$x^2 = 9$$

$$x = \pm \sqrt{9}$$

$$x = \pm 3$$

21.  $10x^2 = 40$

22.  $5x^2 = 45$

23.  $-7x^2 = -7$

24.  $9x^2 = 81$

25.  $x^2 + 1 = 5$

26.  $x^2 - 7 = 9$

27.  $2x^2 - 4 = 4$

28.  $3x^2 - 11 = 64$

**???? Trivia Question ????  
 Geography**  
 What is the average snowfall at the South Pole for one year?

To check your answer:

- Give the square root for each value. *(answer in each box)*
- Write each letter over its matching answer in the Decoder.

1. A $\sqrt{25}$	2. C $\sqrt{16}$	3. E $\sqrt{64}$	4. F $\sqrt{49}$
5. G $\sqrt{196}$	6. H $\sqrt{144}$	7. I $\sqrt{225}$	8. L $\sqrt{169}$
9. M $\sqrt{361}$	10. N $\sqrt{576}$	11. O $\sqrt{256}$	12. P $\sqrt{529}$
13. R $\sqrt{2.89}$	14. S $\sqrt{1.21}$	15. T $\sqrt{4.41}$	16. U $\sqrt{2.56}$
17. V $\sqrt{501.76}$	18. W $\sqrt{479.61}$	19. Y $\sqrt{372.49}$	20. E $\sqrt{924.16}$

### DECODER

$\frac{2.1}{12}$	$\frac{8}{1.1}$	$\frac{16}{1.6}$	$\frac{2.1}{12}$	$\frac{23}{16}$	$\frac{13}{30.4}$	$\frac{1.7}{5}$	$\frac{1.7}{8}$	$\frac{13}{19.3}$
$\frac{14}{30.4}$	$\frac{2.1}{1.1}$	$\frac{19}{16}$	$\frac{1.7}{8}$	$\frac{2.1}{12}$	$\frac{5}{24}$	$\frac{7}{15}$	$\frac{22.4}{30.4}$	
$\frac{15}{24}$	$\frac{4}{12}$	$\frac{8}{1.1}$	$\frac{16}{7}$	$\frac{24}{30.4}$	$\frac{21.9}{1.1}$	$\frac{24}{16}$	$\frac{21.9}{21.9}$	
$\frac{15}{24}$	$\frac{5}{19.3}$	$\frac{8}{5}$	$\frac{1.7}{1.7}$					