Practice – Solving Quadratics by Square Roots

Name _____   Date _____   Period _____

"What do you call a funny book about eggs?"

1. $x^2 = 81$

2. $4x^2 - 18 = -9$

3. $2x^2 + 7 = 207$

4. $5 - x^2 = 20$

5. $16x^2 + 10 = 131$

6. $81x^2 + 17 = 81$

7. $x^2 - 29 = 0$

8. $-3x^2 + 200 = 8$

L. $x = \pm\dfrac{2}{3}$

B. $x = \pm\sqrt{29}$

O. $x = \pm\dfrac{11}{4}$

K. No real solution

Y. $x = \pm 8$

E. $x = \pm\dfrac{8}{9}$

K. $x = \pm 9$

A. $x = \pm\dfrac{3}{2}$

S. $x = \pm\dfrac{4}{11}$

O. $x = \pm 10$

R. $x = 100$

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  2   8   5   1   6   7   5   3   4

Solve using square roots.

9. $5(x-1)^2 = 180$

10. $16(x+5)^2 = 1024$

11. Carter plans to wallpaper the longest rectangular wall in his living room. The wall is twice as long as it is high and has an area of 162 square feet. What is the height of the wall?

12. The height of a triangle is twice the length of its base. The area of the triangle is 50 square meters. Find the height and base to the nearest tenth of a meter.

13. Suppose your class wants to design a T-shirt logo similar to the one shown. You want the shaded region to have an area of 80 in^2.
   A) Write an expression for the area of the square and of the circle.

   B) Write an equation for the area of the orange region.

   C) Solve the equation to find the radius of the circle and the side of the square. Round to the nearest thousandth of an inch.