

Geometry Opener #5

Name: \_\_\_\_\_

Solving equations with square roots.  
 If  $x^2 = a$  then  
 $x = \pm\sqrt{a}$

1. Solve:  $x^2 = 9$   
 $x = \pm\sqrt{9}$   
 $x = \pm 3$

2. Solve:  $x^2 = 27$   
 $x = \pm\sqrt{27}$   
 $x = \pm 3\sqrt{3}$

3. Solve:  $b^2 = 5$   
 $b = \pm\sqrt{5}$

4. Solve:  
 $x^2 + 5 = 37$   
 $x^2 = 32$   
 $x = \pm\sqrt{32}$   
 $x = \pm 4\sqrt{2}$

5. Solve:  
 $3x^2 - 1 = 47$   
 $3x^2 = 48$   
 $x^2 = 16$   
 $x = \pm\sqrt{16}$   
 $x = \pm 4$

8. Find the value  $x$  and  $y$ .

$\frac{6}{18} = \frac{10}{x}$        $\frac{y}{32} = \frac{6}{24}$   
 $6x = 180$        $\frac{y}{32} = \frac{1}{4}$   
 $x = 30$        $4y = 32$   
 $y = 8$

9. Find the value  $x$  and  $y$ .

$\frac{12}{18} = \frac{x+1}{x+5}$        $\frac{2y}{y+15} = \frac{4}{5}$   
 $\frac{4}{5} = \frac{x+1}{x+5}$        $10y = 4y + 60$   
 $4x + 20 = 5x + 5$        $6y = 60$   
 $4x + 15 = 5x$        $y = 10$   
 $15 = x$

6.

Scale factor = 5

$P = 14 \text{ cm}$   
 $A = 10 \text{ cm}^2$   
 $P = 70 \text{ cm}$   
 $A = 250 \text{ cm}^2$

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 $x = \pm\sqrt{\quad}$   
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2. Solve:  $x^2 = 27$   
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3. Solve:  $b^2 = 5$

4. Solve:  
 $x^2 + 5 = 37$

5. Solve:  
 $3x^2 - 1 = 47$

8. Find the value  $x$  and  $y$ .

9. Find the value  $x$  and  $y$ .

6.

Scale factor = 5

$P = 14 \text{ cm}$   
 $A = 10 \text{ cm}^2$   
 $P =$   
 $A =$