

Find the missing sides on the Special Right Triangles:

1. 	2. 	3. 	4. 
5. 	6. 	7. 	8. 

Use separate paper.

9. Find the area and perimeter of the triangle in #1.	10. Find the area and perimeter of the triangle in #2.	11. Find the area and perimeter of the triangle in #3.	12. A new triangle is formed by enlarging the one in #2 by a scale factor of $k = 4$ . Find the area and perimeter of the enlarged triangle.
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Jumbled Answers:  $2\sqrt{6} + 2\sqrt{3}$   $8\sqrt{6} + 8\sqrt{3}$   $10 + 10\sqrt{2}$  50 3 25

Get = 0 and factor with a "diamond"

Algebra Review:

Solve each equation. You may need to factor on some.

13. $5x^2 + 3 = 28$	14. $7x^2 - 5 = 4x^2 + 70$	15. $2x^2 + 2 = 8x^2 - 46$	16. $2x^2 + 11x + 10 = -2$
17. $x^2 - 36 = 0$ *can you solve this two ways?	18. $\frac{x}{6} = \frac{8}{3x}$	19. $\frac{x+3}{9} = \frac{2}{x}$	20. $\frac{1}{x+1} = \frac{x-2}{3x-5}$ *challenge

Jumbled Answers:  $\pm 5$   $-3/2$   $-4$   $\pm 4$  3  $-6$  1 3  $\pm\sqrt{5}$   $\pm 2\sqrt{2}$   $\pm 6$

Linear Functions:

<p>21. A line passes through <math>(-6, -7)</math> and <math>(2, -3)</math>.</p> <ol style="list-style-type: none"> <li>Find the slope of the line.</li> <li>Find the equation of the line starting with <math>y - y_1 = m(x - x_1)</math> and simplifying to <math>y = mx + b</math> form.</li> <li>Find the <math>x</math> and <math>y</math>-intercept of the line.</li> <li>Graph the line and check to see that the original points and the intercepts are accurate.</li> </ol>	<p>22. Line <math>a</math> is <math>y = \frac{2}{3}x + 3</math>.</p> <ol style="list-style-type: none"> <li>Line <math>b</math> is parallel to line <math>a</math>. What is the slope of line <math>b</math>?</li> <li>Line <math>b</math> passes through <math>(0, -1)</math>. Find the equation of line <math>b</math>.</li> <li>Line <math>c</math> is perpendicular to line <math>a</math>. What is the slope of line <math>c</math>?</li> <li>Line <math>c</math> passes through <math>(6, 3)</math>. Find the equation of line <math>c</math>.</li> <li>Graph all three lines accurately.</li> <li>Challenge: Find the point of intersection of line <math>b</math> and <math>c</math> algebraically.</li> </ol>
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Simplify each expression. Any square roots should be in simple radical form.

23. $\frac{2}{3} - \frac{3}{7}$	24. $\frac{2}{3} \cdot \frac{3}{7}$	25. $\frac{2}{3} \div \frac{3}{7}$	26. $\left(4 - \frac{5}{3}\right)^2$
27. $\sqrt{\frac{9}{4}}$	28. $\sqrt{\frac{25}{3}}$	29. $\frac{6}{\sqrt{2}}$	30. $(5\sqrt{3})^2$

Jumbled Answers:  $\frac{-5}{21}$   $\frac{6}{21}$   $\frac{3}{2}$   $\frac{49}{9}$   $\frac{5\sqrt{3}}{3}$   $\frac{14}{9}$  75  $3\sqrt{2}$

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