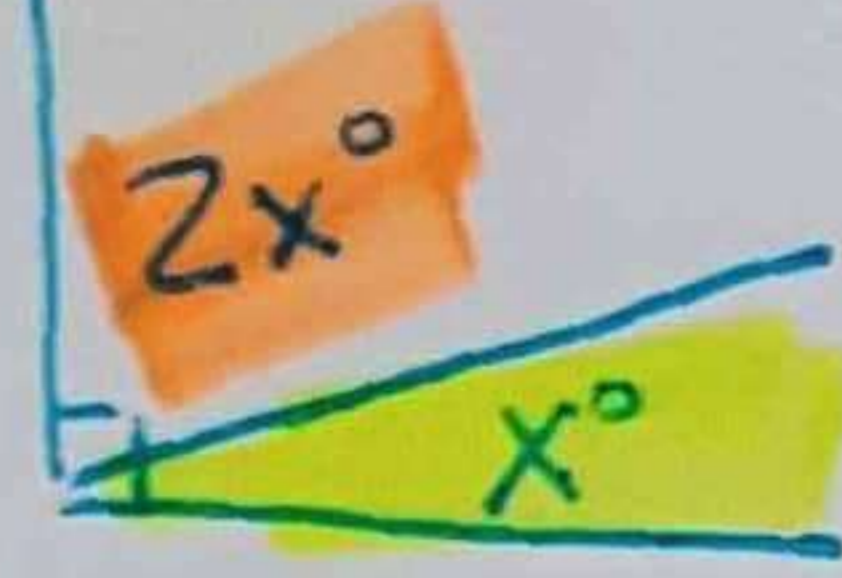
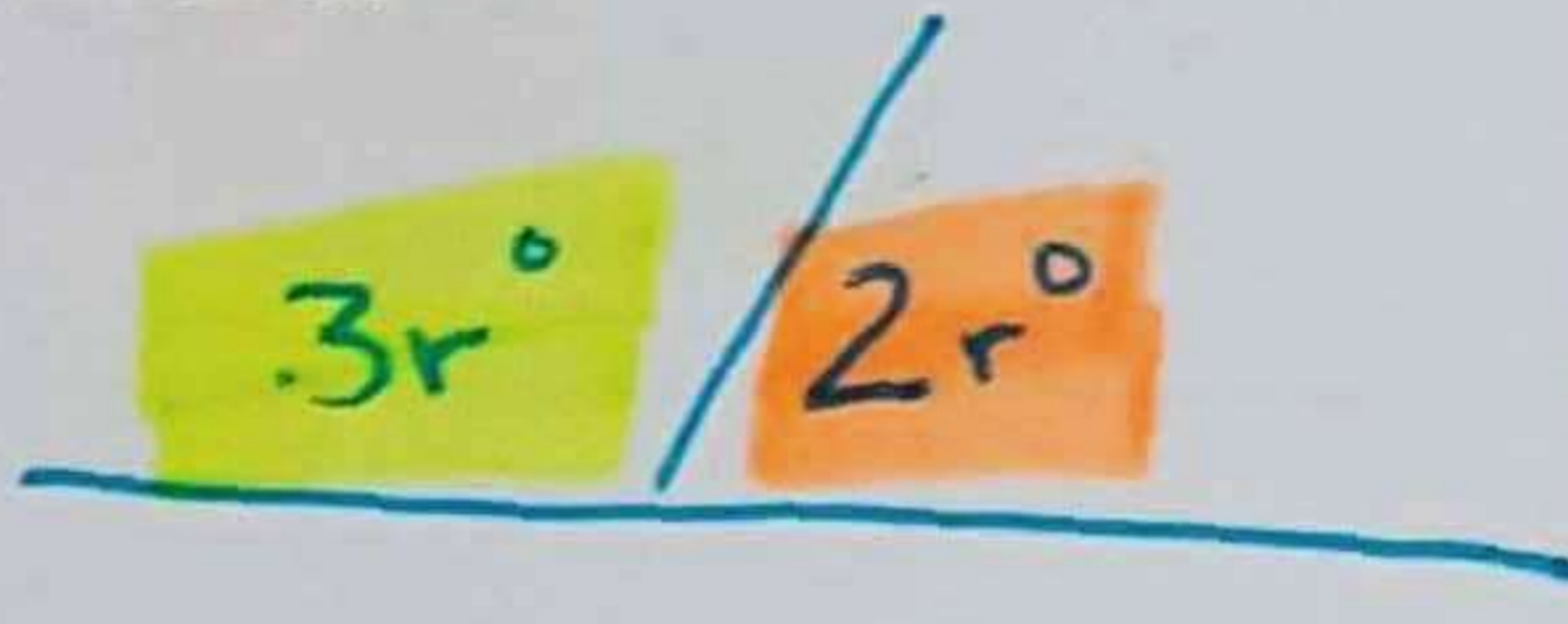


Angle Word Problems

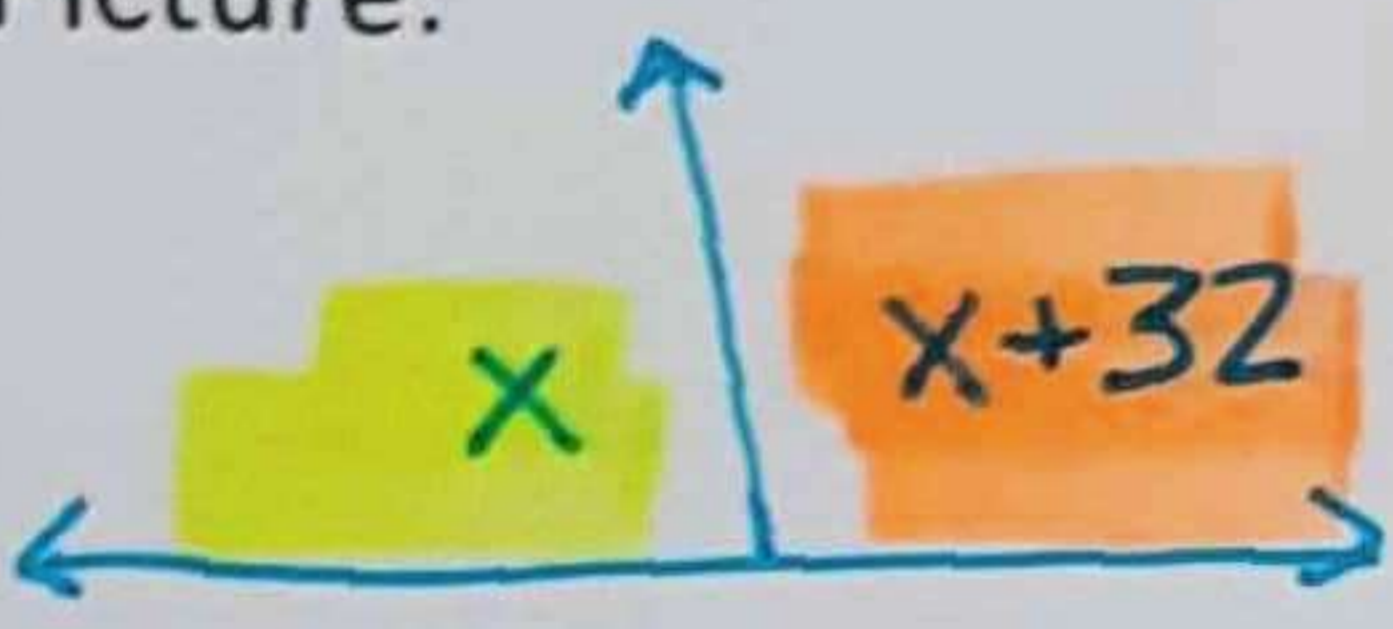
1. Two angles are complimentary. One angle measures x degrees and the other angle is $2x$ degrees. What are the measures of the two angles?

Picture: 	Equation: $\cancel{x}1 + \cancel{x}2 = 90^\circ$ $x + 2x = 90$	Answer: $x = 30^\circ$ Angle 1 = <u>30°</u> Angle 2 = <u>60°</u>
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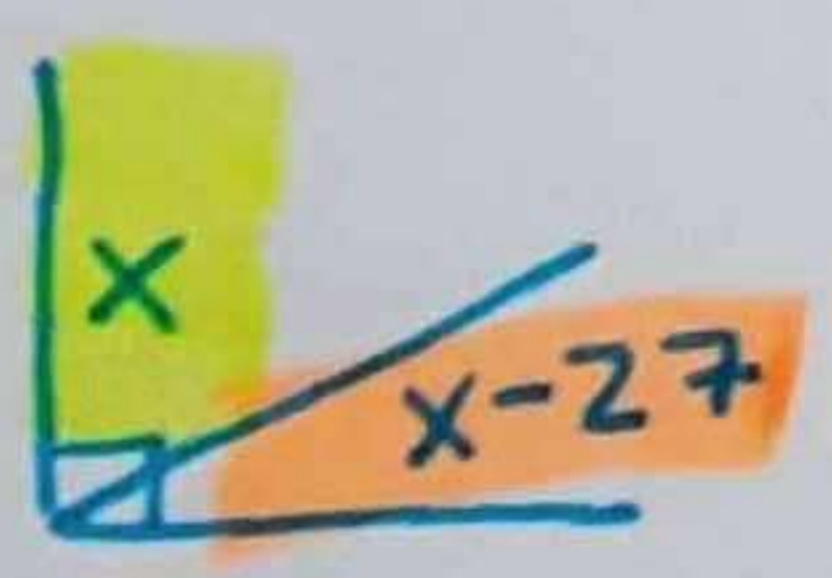
2. Two angles are supplementary. One angle measures $3r$ degrees and the other measures $2r$ degrees. What are the measures of the two angles?

Picture: 	Equation: $\cancel{x}1 + \cancel{x}2 = 180^\circ$ $3r + 2r = 180$	Answer: $r = 36^\circ$ Angle 1 = <u>108°</u> Angle 2 = <u>72°</u>
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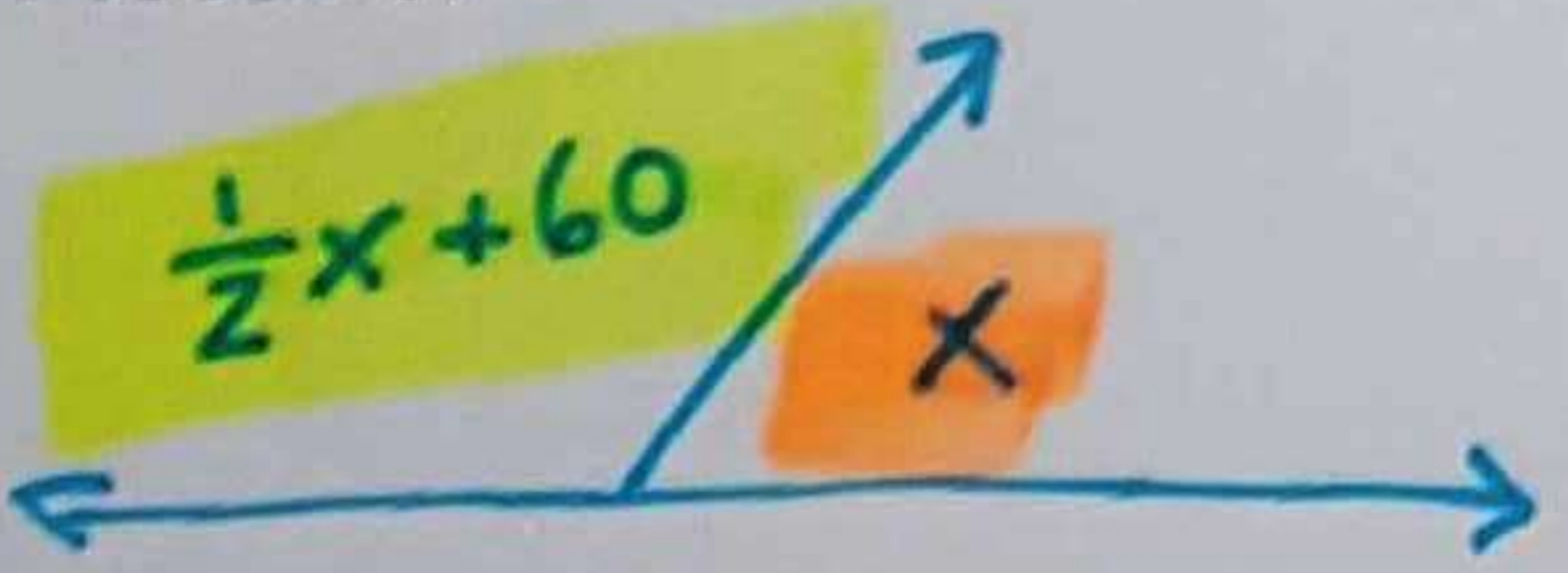
3. What is the measure of an angle whose supplement measures 32 degrees larger?

Picture: 	Equation: $\cancel{x}1 + \cancel{x}2 = 180$ $x + x + 32 = 180$	Answer: Angle = <u>74°</u> Supplement = <u>106°</u>
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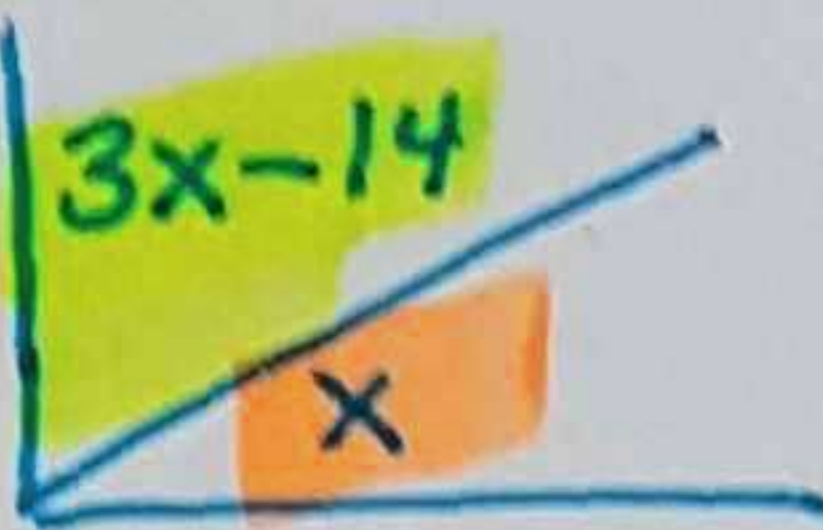
4. An angle measures 27 degrees less than its complement. What are the measures of the two angles?

Picture: 	Equation: $\cancel{x}1 + \cancel{x}2 = 90^\circ$ $x + x - 27 = 90$	Answer: Angle 1 = <u>58.5°</u> Angle 2 = <u>31.5°</u>
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5. One of two supplementary angles measures 60 degrees more than half of the other. Find both angle measures.

Picture: 	Equation: $\cancel{x}1 + \cancel{x}2 = 180^\circ$ $\frac{1}{2}x + 60 + x = 180$	Answer: Angle 1 = <u>100°</u> Angle 2 = <u>80°</u>
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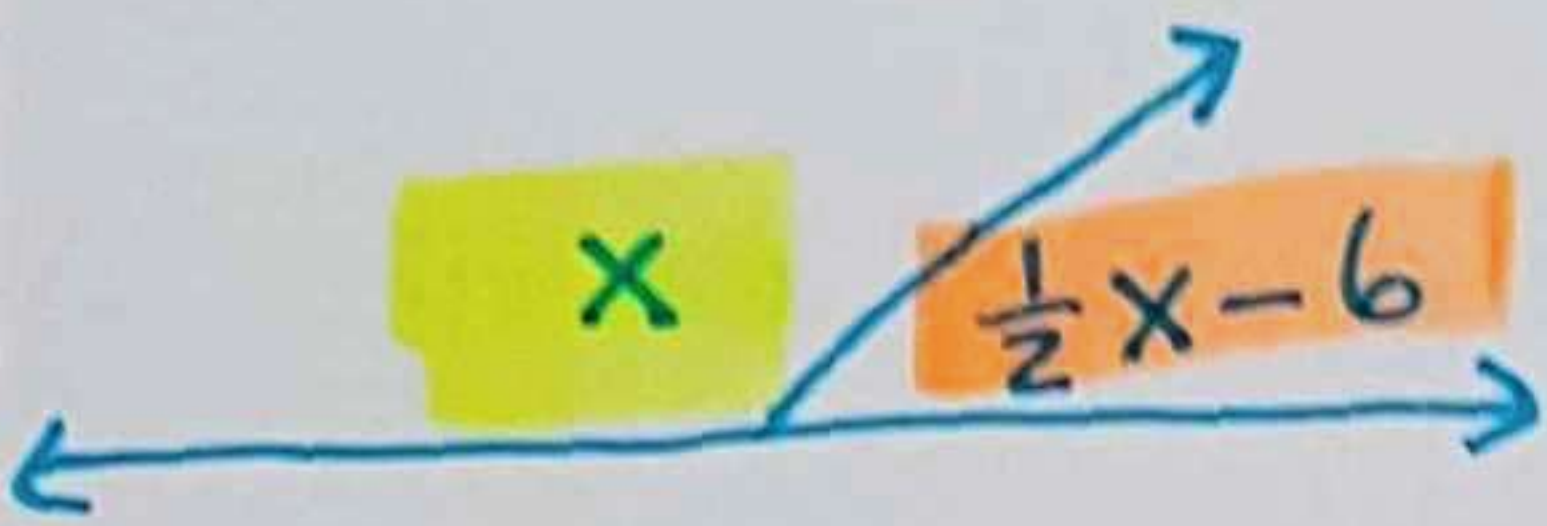
6. An angle measures 14 less than three times its complement. What are the measures of the two angles?

<p>Picture:</p> 	<p>Equation:</p> $x_1 + x_2 = 90^\circ$ $3x - 14 + x = 90$	<p>Answer:</p> <p>Angle 1 = <u>64°</u></p> <p>Angle 2 = <u>26°</u></p>
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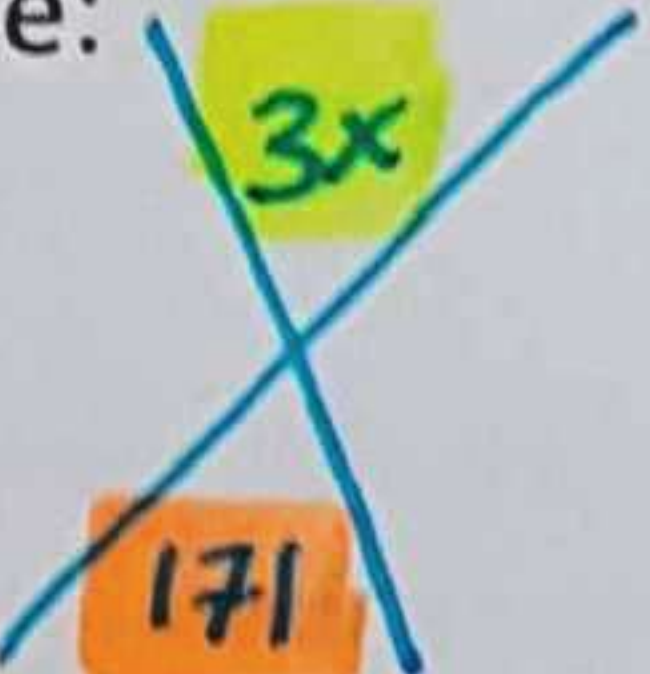
7. Two angles have a sum of 110 degrees. The larger angle is 52 degrees more than the smaller. What are the measures of the two angles?

<p>Picture:</p> 	<p>Equation:</p> $x_1 + x_2 = 110^\circ$ $x + x + 52 = 110$	<p>Answer:</p> <p>Angle 1 = <u>29°</u></p> <p>Angle 2 = <u>81°</u></p>
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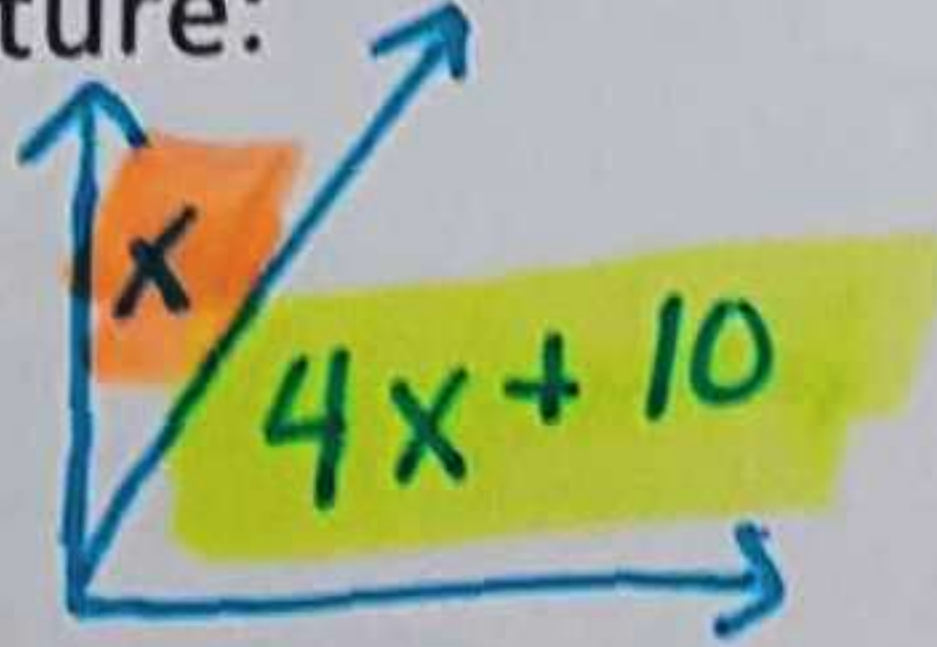
8. Two supplementary angles are such that the smaller is 6 degrees less than half of the larger. What are the measures of the two angles?

<p>Picture:</p> 	<p>Equation:</p> $x_1 + x_2 = 180^\circ$ $x + \frac{1}{2}x - 6 = 180$	<p>Answer:</p> <p>Angle 1 = <u>124°</u></p> <p>Angle 2 = <u>56°</u></p>
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9. Two vertical angles are such that the measure of the first is represented by $3x$ and the measure of the other angle is 171 degrees. What is the value of x in this situation?

<p>Picture:</p> 	<p>Equation:</p> $x_1 = x_2$ $3x = 171$	<p>Answer:</p> <p>$x =$ <u>57°</u></p>
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10. Two complementary angles are such that the first is 10 more than 4 times the other angle. What are the measures of the two angles?

<p>Picture:</p> 	<p>Equation:</p> $x_1 + x_2 = 90^\circ$ $4x + 10 + x = 90$	<p>Answer:</p> <p>Angle 1 = <u>34°</u></p> <p>Angle 2 = <u>16°</u></p>
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