



Crack the Code



Exact Trigonometric Ratios

Work the answers to the questions below, without using a calculator.

To get the three-digit code, simply total all your answers.

| | | | | | |
|---|--|--|---|--|--|
| A | A right triangle with a 45° angle at the top-left vertex and a 45° angle at the bottom-right vertex. The hypotenuse is labeled $6\sqrt{2}$. | | B | A right triangle with a 60° angle at the top-left vertex and a 30° angle at the bottom-right vertex. The side opposite the 30° angle is labeled $20\sqrt{3}$. | |
| C | A right triangle with a 30° angle at the top-left vertex and a 60° angle at the bottom-right vertex. The side opposite the 30° angle is labeled $15\sqrt{3}$. | | D | A right triangle with a 45° angle at the top-left vertex and a 45° angle at the bottom-right vertex. The hypotenuse is labeled $7\sqrt{2}$. | |
| E | A right triangle with a 60° angle at the top-left vertex and a 30° angle at the bottom-right vertex. The side opposite the 30° angle is labeled 28. | | F | A right triangle with a 45° angle at the top-left vertex and a 45° angle at the bottom-right vertex. The hypotenuse is labeled 17. | |
| G | A right triangle with a 30° angle at the top-left vertex and a 60° angle at the bottom-right vertex. The side opposite the 30° angle is labeled $8\sqrt{3}$. | | H | A right triangle with a 30° angle at the top-left vertex and a 60° angle at the bottom-right vertex. The side opposite the 30° angle is labeled 42. | |
| I | A right triangle with a 45° angle at the top-left vertex and a 45° angle at the bottom-right vertex. The hypotenuse is labeled $3\sqrt{2}$. | | J | A right triangle with a 60° angle at the top-left vertex and a 30° angle at the bottom-right vertex. The side opposite the 30° angle is labeled $9\sqrt{3}$. | |
| K | A right triangle with a 60° angle at the top-left vertex and a 30° angle at the bottom-right vertex. The side opposite the 30° angle is labeled $\sqrt{12}$. | | L | A right triangle with a 30° angle at the top-left vertex and a 60° angle at the bottom-right vertex. The side opposite the 30° angle is labeled $4\sqrt{12}$. | |



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Work the answers to the questions below, without using a calculator.

To get the three-digit code, simply total all your answers. **The three-digit code is 202.**

| | | | | | |
|---|------------------------|----|---|------------------------|----|
| A | 6 $\sqrt{2}$ | 12 | B | 20 $\sqrt{3}$ x | 30 |
| C | 15 $\sqrt{3}$ x | 15 | D | 7 $\sqrt{2}$ x | 7 |
| E | 28 x | 56 | F | x 17 | 17 |
| G | 8 $\sqrt{3}$ x | 16 | H | 42 x | 21 |
| I | 3 $\sqrt{2}$ x | 3 | J | 9 $\sqrt{3}$ x | 9 |
| K | $\sqrt{12}$ x | 4 | L | 4 $\sqrt{12}$ x | 12 |