

9.4

Puzzle Time

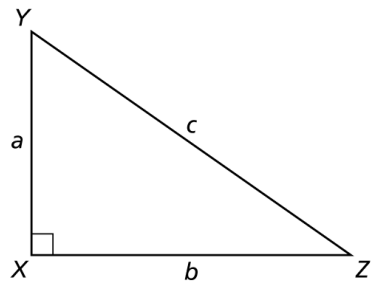
What Exam Does An Exterminator Have To Take?

Write the letter of each answer in the box containing the exercise number.

Complete the sentence.

1. A(n) _____ of the lengths of two sides in a right triangle is called a trigonometric ratio.
2. The tangent ratio is a(n) _____ for acute angles that involves the lengths of the legs of a right triangle.
3. The angle that an upward line of sight makes with a line drawn horizontally is called the angle of _____.
4. The _____ is the ratio of the leg opposite a given angle to the leg adjacent to the given angle in a right triangle.

Use the diagram. Round your answer to the nearest tenth.

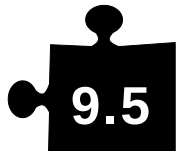


5. $a = 10, b = 15, c = 5\sqrt{13}$; Find the tangent of $\angle Z$.
6. $a = 10, b = 15, c = 5\sqrt{13}$; Find the tangent of $\angle Y$.
7. $a = 18, m\angle Y = 42^\circ$; Find b .
8. $b = 22, m\angle Z = 30^\circ$; Find a .
9. $b = 28, m\angle Y = 64^\circ$; Find a .

Answers

- O. geometric ratio
- T. tangent
- A. 0.7
- N. side
- P. ratio
- T. hypotenuse
- S. 13.7
- H. 1.1
- E. 0.1
- S. trigonometric ratio
- E. 1.5
- R. 1.6
- T. elevation
- U. 22
- T. 16.2
- B. 28
- S. depression
- E. 12.7

5		1	8	2	3		7	6	9	4
---	--	---	---	---	---	--	---	---	---	---



Puzzle Time

What Is A Computer Virus?

Write the letter of each answer in the box containing the exercise number.

Complete the sentence.

- The _____ and cosine ratios are trigonometric ratios for acute angles that involve the lengths of a leg and the hypotenuse of a right triangle.
- The sine of an angle is equal to the _____ of its complement.
- The cosine of an angle is equal to the sine of its _____.
- The angle that a downward line of sight makes with a horizontal line is called the angle of _____.

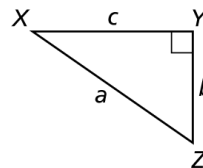
Write the sine in terms of cosine.

5. $\sin 48^\circ$ 6. $\sin 78^\circ$ 7. $\sin 25^\circ$

Write the cosine in terms of sine.

8. $\cos 36^\circ$ 9. $\cos 15^\circ$ 10. $\cos 71^\circ$

Find the indicated value using the diagram. Round to four decimal places.



- $a = 18, b = 15, c = 11$; Find the sine of angle X .
- $a = 27, b = 14, c = 7$; Find the cosine of angle Z .
- $a = 12, b = 4, c = 7$; Find the cosine of angle X .
- $a = 16, b = 9, c = 11$; Find the sine of angle Z .
- $a = 22, m\angle Z = 41^\circ$; Find b .
- $a = 22, m\angle Z = 41^\circ$; Find c .

Answers

- | | |
|--------------------|--------------------|
| L. $\sin 54^\circ$ | M. 14.4333 |
| A. tangent | M. $\cos 48^\circ$ |
| N. cosine | T. sine |
| E. $\sin 19^\circ$ | A. $\sin 75^\circ$ |
| L. $\cos 12^\circ$ | I. 0.6875 |
| A. 0.8333 | S. 0.8213 |
| S. $\cos 65^\circ$ | S. $\cos 42^\circ$ |
| O. elevation | N. supplement |
| L. 0.5185 | N. depression |
| U. $\cos 35^\circ$ | R. 0.5833 |
| V. $\sin 13^\circ$ | |
| I. complement | E. 16.6036 |
| D. 0.6554 | G. 12.7998 |

9		1	10	13	16	14	4	11	6		3	12	8	2	15	7	5
---	--	---	----	----	----	----	---	----	---	--	---	----	---	---	----	---	---