Name_____Date_____Period_____

8.1 Right Triangle Trigonometry (G.SRT.6)

Find the missing side using the Pythagorean Theorem.

1.

21
X
15

2.

12
9
b

3.

24 cm
5 cm
x
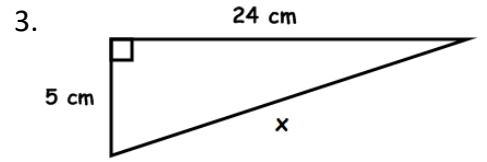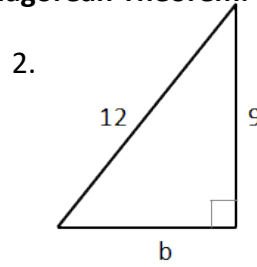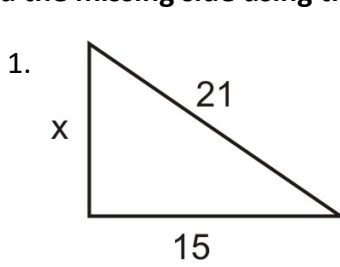
Find the values of the six trigonometric functions for angle θ.
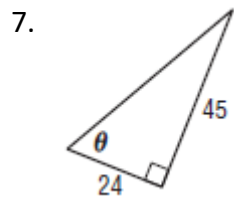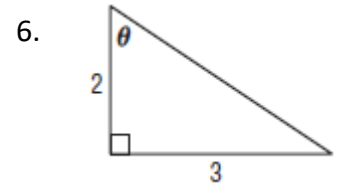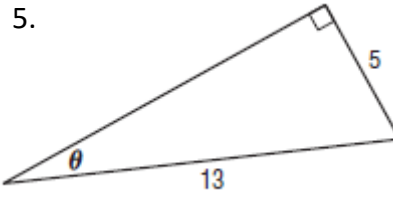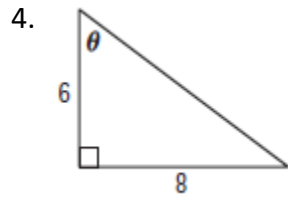
4.

θ
6
8

5.

5
θ
13

6.

θ
2
3

7.

45
θ
24

8.

5
θ
11

9.

$3\sqrt{3}$
θ
3
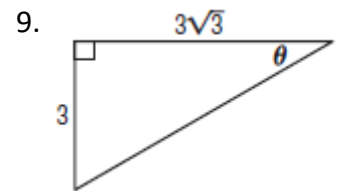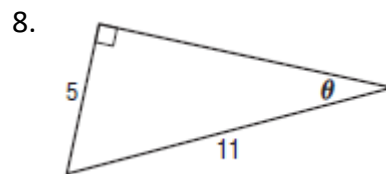
Use a calculator to find each value.

10. $\sin(9°)$

11. $\cos(37°)$

12. $\tan(48°)$

13. $\cos(55°)$

14. $\tan(72°)$

15. $\sin(23°)$

16. $\sec(23°)$

17. $\csc(53°)$

18. $\cot(102°)$

19. $\sec(50°)$

20. $\csc(86°)$

21. $\cot(60°)$

Simplify.

22. $(5x^2 - 2x + 1) - (4 - 7x + 10x^2)$

23. $(2x + 5)(3x - 4)$

Factor.

24. $10x^2 - 15x$

25. $5x^2 + 18x + 9$

26. $16x^2 - 25y^2$

27. $4x^2 + 20x + 25$