

F.TF.B.7: Factoring Trigonometric Expressions

- 1 Factored completely, the expression $16 \tan \theta - \tan^3 \theta$ is equivalent to
- | | |
|-------------------------------------|--|
| 1) $\tan \theta(4 - \tan \theta)^2$ | 3) $\tan \theta(4 - \tan \theta)(4 + \tan \theta)$ |
| 2) $\tan \theta(\tan \theta - 4)^2$ | 4) $\tan \theta(\tan \theta + 4)(\tan \theta - 4)$ |
- 2 Factor completely: $\tan^3 x - 9 \tan x$

F.TF.B.7: Factoring Trigonometric Expressions**Answer Section**

1 ANS: 3

$$16 \tan \theta - \tan^3 \theta = \tan \theta (16 - \tan^2 \theta) = \tan \theta (4 - \tan \theta)(4 + \tan \theta)$$

REF: 081602a2

2 ANS:

$$\tan x (\tan x + 3)(\tan x - 3)$$

REF: 089916siii