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# PHYTECH.INTERNATIONAL

## 10

3

1. , , , 28. ,

2. , , 1 8. , 2. .

3. 
$$\sqrt{2x + \frac{7}{x^2}} + \sqrt{2x - \frac{7}{x^2}} < \frac{6}{x}.$$

4. , 
$$3 \operatorname{tg}^2 x + 3 \operatorname{ctg}^2 x + \frac{2}{\sin^2 x} + \frac{2}{\cos^2 x} = 19.$$
  $\sin^4 x - \sin^2 x .$

5. *A* . *B*  
*A* .

·  $\frac{20}{81} AB .$   
 , ( , ) ,  $AB$   
 1:5 .  
 ?

6. *PQRS* ,  $\angle PQR = 90^\circ$  ,  $\angle QRS > 90^\circ$  , *SQ* 24  
*S* , *R* *QS* 5.  
*PQRS* .

7. 2015 ,

8. 
$$\begin{cases} x^2 - y^2 + z = \frac{27}{xy}, \\ y^2 - z^2 + x = \frac{27}{yz}, \\ z^2 - x^2 + y = \frac{27}{xz}. \end{cases}$$

1.  $\sin^2 x + \cos^2 x = 1$ ,  $\sin^2 x - \cos^2 x = 36$ .

2.  $\sin^2 x + \cos^2 x = 6$ ,  $\sin^2 x - \cos^2 x = 14$ .

3. 
$$\sqrt{3x - \frac{5}{x^2}} + \sqrt{3x + \frac{5}{x^2}} < \frac{8}{x}.$$

4. 
$$4 \operatorname{tg}^2 x + 4 \operatorname{ctg}^2 x - \frac{1}{\sin^2 x} - \frac{1}{\cos^2 x} = 17.$$
  
 $\cos^2 x - \cos^4 x.$

5.  $AB$   $AB$   $\frac{56}{225} AB$   $2:3$   $?$

6.  $PQRS$   $\angle PQR = 90^\circ$ ,  $\angle QRS < 90^\circ$ ,  $SQ = 24$   
 $S$ ,  $R$   $QS = 16$ .  
 $PQRS$ .

7. 2017

8. 
$$\begin{cases} x^2 - y^2 + z = \frac{64}{xy}, \\ y^2 - z^2 + x = \frac{64}{yz}, \\ z^2 - x^2 + y = \frac{64}{xz}. \end{cases}$$