

$$1) \frac{25}{18} = \frac{x}{\pi} \Rightarrow x = \frac{25\pi}{18} = \frac{5\pi}{4}$$

$$2) \frac{125}{18} = \frac{x}{\pi} \Rightarrow x = \frac{125\pi}{18} = \frac{125\pi}{18}$$

$$3) \frac{5\pi}{12} = \frac{x}{18} \Rightarrow x = \frac{18 \cdot 5\pi}{12} = 75^\circ$$

$$4) \frac{5\pi}{12} = \frac{x}{18} \Rightarrow x = \frac{18 \cdot 5\pi}{12} = 75^\circ$$

$$\frac{a\pi}{18} = \frac{D}{18} \Rightarrow \frac{18a}{18} = D \quad \frac{125a}{9 \times 18} = \frac{D}{18} \Rightarrow \frac{18a \times 125a}{9 \times 18 \times 18} = 12/5a$$

$$= 12/5a$$

$$10a + 12/5a + 12/5a = 18$$

$$\Rightarrow 14/5a = 18 \Rightarrow a = 75^\circ$$

$$5) \frac{1}{x} \times \frac{1}{y} = \frac{1}{x} \times \frac{1}{y} = 1 + 2 = 1$$

$$6) \frac{1}{\sqrt{3} + 1 + \sqrt{3}} = \frac{1}{\sqrt{3}} = \frac{1}{\sqrt{3}} \times \frac{\sqrt{3}}{\sqrt{3}} = \frac{1 \times \sqrt{3}}{3}$$

$$\sin(45^\circ) = \sin 45^\circ \cos 45^\circ - \cos 45^\circ \sin 45^\circ \Rightarrow \sin 45^\circ = \sin 45^\circ$$

$$\sin^2 \theta = \frac{1}{2} \Rightarrow \frac{1}{\sin^2 \theta} = 1 + \tan^2 \theta \Rightarrow 2 = 1 + \tan^2 \theta \Rightarrow \tan^2 \theta = 1$$

$$\Rightarrow \tan \theta = \pm 1 \Rightarrow \tan \theta = \pm 1$$

$$\tan \theta = \frac{1 - \tan^2 \theta}{1 + \tan^2 \theta} \Rightarrow \tan \theta = \frac{1 - \frac{1}{2}}{1 + \frac{1}{2}} = \frac{\frac{1}{2}}{\frac{3}{2}} = \frac{1}{3} \Rightarrow \theta = 18^\circ = \frac{\pi}{10}$$

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