## Solutions

Each answer shows the steps, then the **result**.

**2.1**

- $\sin\theta = \text{opp}/\text{hyp}$

**2.2**

- $\tan\theta = \sin\theta / \cos\theta$

**2.3**

- $\sin\theta = \frac{3}{5}$; $\cos\theta = \frac{4}{5}$

**3.1 B**

- adj/hyp.

**3.2 B**

- $\sin\theta / \cos\theta$.

**3.3**

(a)

- $\frac{5}{13}$

(b)

- $\frac{12}{13}$

(c)

- $\frac{5}{12}$

**3.4**

(a)

- $\sin\theta = \dfrac{y}{r} = \mathbf{\dfrac{4}{5}}$
- $\cos\theta = \dfrac{x}{r} = -\mathbf{\dfrac{3}{5}}$

(b)

- $\text{slope} = \dfrac{4-0}{-3-0} = -\mathbf{\dfrac{4}{3}} = \dfrac{\sin\theta}{\cos\theta}$

(c)

- $\theta = \dfrac{\text{arc}}{r} = \dfrac{10}{4} = \mathbf{2.5}$ radians

(d)

- **undefined**: the ray is vertical, so its slope ($y/x$ with $x = 0$) does not exist