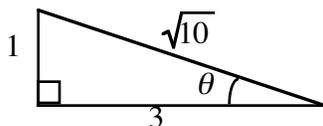


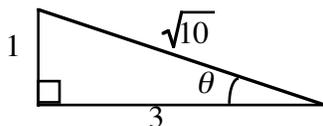
**Problems for Gateway #3: The Triangle Definition of Sine and Cosine
and Inverse Trigonometric Functions**

1. The value of θ is:



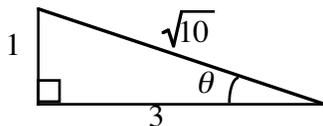
- (a) $\sin^{-1}(3)$ (b) $\cos^{-1}(1/3)$
 (c) $\tan^{-1}(1/3)$ (d) $\tan^{-1}(3)$
 (e) None of the above.

2. The value of θ is:



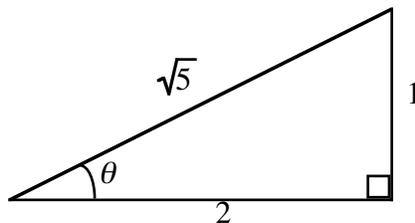
- (a) $\cos^{-1}(\frac{1}{\sqrt{10}})$ (b) $\sin^{-1}(\frac{1}{\sqrt{10}})$
 (c) $\tan^{-1}(\frac{1}{\sqrt{10}})$ (d) $\tan^{-1}(\sqrt{10})$
 (e) None of the above.

3. The value of θ is:



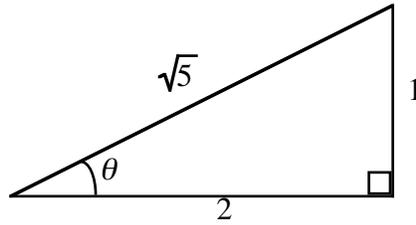
- (a) $\sin^{-1}(\frac{3}{\sqrt{10}})$ (b) $\sin^{-1}(1/3)$
 (c) $\cos^{-1}(\frac{3}{\sqrt{10}})$ (d) $\cos^{-1}(1/3)$
 (e) None of the above.

4. The value of θ is:

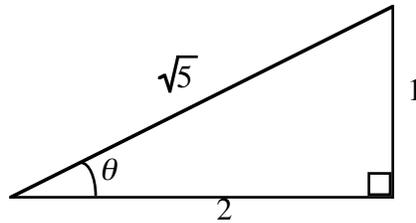


- (a) $\sin^{-1}(\frac{2}{\sqrt{5}})$ (b) $\cos^{-1}(\frac{1}{\sqrt{5}})$
 (c) $\tan^{-1}(2)$ (d) $\tan^{-1}(0.5)$

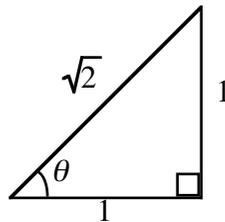
- (e) None of the above.
5. The value of θ is:



- (a) $\cos^{-1}(\frac{1}{\sqrt{5}})$ (b) $\sin^{-1}(\frac{2}{\sqrt{5}})$
(c) $\tan^{-1}(\frac{2}{\sqrt{5}})$ (d) $\tan^{-1}(\frac{1}{\sqrt{5}})$
(e) None of the above.
6. The value of θ is:

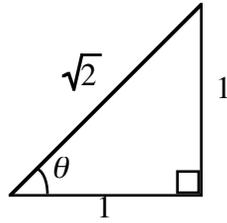


- (a) $\cos^{-1}(\frac{2}{\sqrt{5}})$ (b) $\sin^{-1}(\frac{2}{\sqrt{5}})$
(c) $\tan^{-1}(\frac{2}{\sqrt{5}})$ (d) $\cos^{-1}(\frac{1}{\sqrt{5}})$
(e) None of the above.
7. The value of θ is:



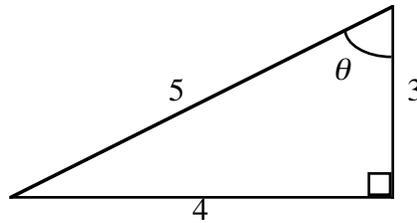
- (a) $\sin^{-1}(\sqrt{2})$ (b) $\cos^{-1}(\sqrt{2})$
(c) $\tan^{-1}(0.5)$ (d) $\tan^{-1}(1)$
(e) None of the above.

8. The value of θ is:



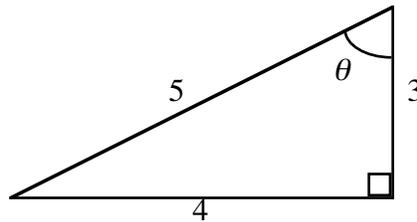
- (a) $\sin^{-1}(\sqrt{2})$ (b) $\tan^{-1}(\sqrt{2})$
(c) $\cos^{-1}(\sqrt{2})$ (d) $\sin^{-1}(1)$
(e) None of the above.

9. The value of θ is:



- (a) $\sin^{-1}(0.75)$ (b) $\sin^{-1}(1.2)$
(c) $\sin^{-1}(0.8)$ (d) $\sin^{-1}(1.33)$
(e) None of the above.

10. The value of θ is:



- (a) $\cos^{-1}(0.6)$ (b) $\cos^{-1}(0.75)$
(c) $\cos^{-1}(0.8)$ (d) $\cos^{-1}(1.25)$
(e) None of the above.

ANSWERS:

1. C 2. B 3. C 4. D 5. E 6. A
7. D 8. E 9. C 10. A