

# Answers

1. B
2. B
3. --
4. C
5. D
6. A
7. B
8. C
9. A
10. B
11. B
12. C
13. B
14. C
15. --
16. C
17. D
18. D
19. B
20. B
21. C

18.  $\tan \theta \rightarrow Q1$ 

S	A
T	C

 $\rightarrow \textcircled{+}$

$$\cos \theta = \frac{4}{7}$$

$$\sin^2 \theta + \cos^2 \theta = 1$$

$$\sin^2 \theta + \left(\frac{4}{7}\right)^2 = 1$$

$$\sin^2 \theta + \frac{16}{49} = \frac{49}{49}$$

$$\quad \quad \quad \frac{-16}{49} \quad \quad \frac{-16}{49}$$

$$\sin^2 \theta = \frac{33}{49}$$

$$\sin \theta = \frac{\sqrt{33}}{7}$$

$$\tan \theta = \frac{\sin \theta}{\cos \theta} = \frac{\frac{\sqrt{33}}{7}}{\frac{4}{7}} = \boxed{\frac{\sqrt{33}}{4}}$$

22.  $n = 4200$  Margin of Error =  $\pm \frac{1}{\sqrt{n}} = \pm \frac{1}{\sqrt{4200}}$   
 $\approx 0.015 = \boxed{1.5\%}$

23.  $n = 1350$  MoE =  $\pm \frac{1}{\sqrt{n}} = \pm \frac{1}{\sqrt{1350}} \approx 0.027 = \boxed{2.7\%}$   
 $61\% - 2.7\% = 58.3\%$   
 $61\% + 2.7\% = 63.7\%$

between 58.3% and 63.7%