Pre-Calc AB Worksheet 1 : Answers

1. $k = -26,\ 4$

2. $a = -8,\ 16$

3. $x = -9,\ 3$

4. $r = -3,\ -1$

5. $x = -\dfrac{\sqrt{133}}{7},\ \dfrac{\sqrt{133}}{7}$

6. $r = \dfrac{-1-\sqrt{89}}{8},\ \dfrac{-1+\sqrt{89}}{8}$

7. $m = \dfrac{-1-\sqrt{97}}{6},\ \dfrac{-1+\sqrt{97}}{6}$

8. $n = \dfrac{4-\sqrt{22}}{2},\ \dfrac{4+\sqrt{22}}{2}$

9. $-\dfrac{17}{4} - \dfrac{i}{4}$

10. $\dfrac{-5+41\sqrt{5}}{419}$

11. $r = 6,\ 10$

12. No Solution.

13. The shaded area is $15\pi\ cm^2$.

14. The shaded area is $400(\pi - 1)\ cm^2$.

15. The surface area is $3rs + \frac{3\sqrt{3}}{2}r^2$ square units.
    The volume is $\frac{3\sqrt{3}}{2}r^2h$ cubic units.

16. (1) Given
    (2) Reflexive Property
    (3) SAS

17. (1) Given
    (2) Definition of Bisects
    (3) Reflexive Property
    (4) AAS or AAAS or ASA

18. (1) Given
    (2) $\overline{FS} \cong \overline{FS}$
    (3) $\triangle FTS \cong \triangle FRS$
    (3) SSS

19. (2) $\angle B \cong \angle E$
    (3) Given
    (4) AAS or AAAS or ASA

20. (1) $\overline{PQ} \cong \overline{RS}$
    (2) $\angle PQS \cong \angle RSQ$
    (3) Reflexive Property
    (4) SAS

21. (1) Given
    (2) $\overline{AC} \cong \overline{DF}$
    (2) Given
    (3) $\overline{BD} \cong \overline{EF}$
    (3) Given
    (4) $\triangle ABD \cong \triangle DEF$

22. (1) $\angle L \cong \angle N$
    (1) Given
    (2) $\angle LOM \cong \angle NMO$
    (3) $\overline{MO} \cong \overline{MO}$
    (4) AAS or AAAS or ASA

23. (1) Given
    (2) $\overline{AE}$ bisects $\overline{BD}$
    (3) $\overline{DC} \cong \overline{CB}$
    (4) Vertically Opposite Angles
    (5) AAS or AAAS or ASA

24. (1) Given
    (2) $\overline{PQ} \parallel \overline{ST}$
    (3) Alternate Interior Angles
    (4) $\angle PRQ \cong \angle TRS$
    (4) Vertically Opposite Angles
    (5) $\triangle PQR \cong \triangle TSR$