

UNIT TEST    Lessons 1-10

Simplify.

1.  $(2^0)(2^{-3})(2^3) =$

2.  $X^9 \div X^3 =$

3.  $(4Q^3)^2 =$

4.  $\frac{X^3Y^{-2}}{Y^2X^4} =$

Add or Subtract.

5.  $\frac{3}{4A} - \frac{8}{4B} =$

6.  $\frac{R}{R} + R^0 =$

7.  $\frac{2Y}{X+Y} + \frac{Y}{X-Y} =$

8.  $4R^6TR^{-2} + 5R^4T - 2T =$

UNIT TEST I

Solve using scientific notation.

9.  $(.0056)(.034) =$

10.  $(45,500)(21,000,000) =$

11.  $(32,000) \div (.00016) =$

12.  $\frac{(.00023)(160)}{.002} =$

Simplify.

13.  $(4\sqrt{5})(5\sqrt{3}) =$

14.  $5\sqrt{6} + 2\sqrt{6} =$

15.  $\frac{6}{\sqrt{2}} + \frac{1}{\sqrt{3}} =$

16.  $\sqrt{36X^4} =$

17.  $\left(\frac{16}{25}\right)^{\frac{1}{2}} =$

18.  $\sqrt{\sqrt{16}} =$

Find the factors.

19.  $3X^2 + 17X + 10$

20.  $3X^2 - 9X + 6$

21.  $X^4 - 1$

22.  $2X^2 + 3X - 2$

Solve for the unknown.

23.  $X^2 - 10X = -18 - X$

24.  $2X^2 + 2X + 14 = 32 + 2X$

25.  $2X + 15 = X^2$

26.  $X^3 = 16X$

UNIT TEST I

Simplify, and combine like terms where possible.

27.  $\sqrt{-144} =$

28.  $\sqrt{-8} + \sqrt{-4} =$

29.  $(4\sqrt{-5})(2\sqrt{-6}) =$

30.  $(i^3)^2 =$

Simplify, or put in standard form.

31.  $\frac{X}{8+2i} =$

32.  $\frac{2}{1+\sqrt{2}}$

Answer the questions.

33. What is the third term in  $(X + Y)^5$ ?

34. What is the second term in  $(A + B)^4$ ?

35. What is the fourth term in  $(D - 1/2)^6$ ?