

$$\therefore \text{continued product} = \frac{1-x^8}{1-x} \cdot \frac{1-x^9}{1-x^2} \cdot$$

$$\frac{1-x^{27}}{1-x^9} \dots \frac{1-x^n}{1-x^{n-1}}$$

$$= \frac{1-x^n}{1-x} = 1+x+x^2+x^3+x^4+\dots+x^{n-1}$$

42. Solve the equation

$$2x^4 - 4x + 1 = 0$$

$$2(x^4 + 2x^2 + 1) - 4x^2 - 4x - 1 = 0$$

$$2(x^2 + 1)^2 = (2x + 1)^2$$

$$\therefore \sqrt{2}(x^2 + 1) = \pm(2x + 1)$$

$$x^2\sqrt{2} + 2x + (\sqrt{2} - 1) = 0, \text{ taking + sign}$$

$$x = \frac{1 \pm \sqrt{1 - 2 + \sqrt{2}}}{\sqrt{2}} = \frac{1 \pm \sqrt{\sqrt{2} - 1}}{\sqrt{2}}$$

$$\text{or } x^2\sqrt{2} + 2x + (\sqrt{2} + 1) = 0, \text{ taking negative sign}$$

$$x = \frac{-1 \pm \sqrt{1 - 2 - \sqrt{2}}}{\sqrt{2}} = \frac{-1 \pm \sqrt{\sqrt{2} + 1}(\sqrt{-1})}{\sqrt{2}}$$

MODERN LANGUAGES.

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EXERCISES IN ENGLISH.

1. Expand the italicized phrases into clauses:—

(a) He is generally the last *to leave the office.*

(b) We need no further evidence *of his sincerity.*

(c) He insisted *on our accompanying him.*

(d) They waited *to hear the result.*

(e) I am quite aware *of its great importance.*

(f) You have done nothing *to be ashamed of.*

(g) She was *too angry to listen to them.*

(h) You would do well *to imitate his example.*

(i) *All danger being over* they returned to their homes.

(j) *Granting all that,* I fail to see the justice of it.

(2) Supply the ellipses in the following:—

(a) He looks better than when I last saw him.

(b) He walked as if he were lame.

(c) I believe he would sooner starve than beg.

(d) What can be easier than to do that?

(e) We are no nearer the solution of it than at first.

(f) What if I did see him do it?

3. Change the voice of the verbs in the following:—

(a) She has disposed of all her tickets.

(b) The opportunity was taken advantage of by the Board.

(c) Nobody will ever find out where he was buried.

(d) The committee look on it as the best plan that has yet been suggested.

(e) If he had not called attention to it probably it would never have been noticed.

(f) The Secretary wrote her yesterday about the matter.

4. Substitute words or phrases of equivalent meaning for the italicized ones:—

(a) The *situation* so long and *ardently desired* had been *abolished*.

(b) He *proceeded* to *execute* the instructions with *alacrity*.

(c) The *maritime supremacy* of England was *imperilled*.

(d) He *endeavoured* to *avert* the *impending calamity*.

(e) An *immense concourse* had *assembled* to *witness* it.

(f) While not *destitute* of *patriotism*, he was *prone* to *malevolence* and apt to be *vindictive*.

5. Break up into a series of simple sentences:—

(a) Many of the crew who had outraged him by their insolence now crouched at his feet, begging pardon for all the trouble they had caused him, and promising the blindest obedience for the future.

(b) Kindling the bark which they had collected, they rushed forward and tried to pile it blazing against the palisade; but so brisk and steady a fire met them that they recoiled and at last gave way, leaving many of their number on the ground, among whom was the chief of the Senecas.

6. Combine each of the following groups