EduSahara™ Learning Center Assignment

Grade : Class X, CBSE
Chapter : Quadratic Equations
Name : Quadratic Equations Miscellaneous

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1. Solve : $\frac{(3x+9)}{(2x+6)} = \frac{(2x+3)}{(x+7)}$

(i) (-3 , 14) (ii) (-3 , 15) (iii) (3 , -15) (iv) (-1 , 15) (v) (-3 , 13)

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2. Solve : $\frac{(3x+3)}{(3x+15)} + \frac{(3x+18)}{(x+6)} = \frac{31}{8}$

(i) (27 , -7) (ii) (28 , -6) (iii) (29 , -6) (iv) (27 , -6) (v) (27 , -9)

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3. Solve : $(x^2-8x)^2 - 6(x^2-8x) + 5 = 0$

(i) $(4+\sqrt[4]{21})$, $(4-\sqrt[4]{21})$, $(4+\sqrt[4]{17})$, $(4-\sqrt[4]{17})$

(ii) $(4+21)$, $(4-21)$, $(4+17)$, $(4-17)$

(iii) $(7+\sqrt{21})$, $(6-\sqrt{21})$, $(7+\sqrt{17})$, $(7-\sqrt{17})$

(iv) $(4+\sqrt{21})$, $(4-\sqrt{21})$, $(4+\sqrt{17})$, $(4-\sqrt{17})$

(v) $(1+\sqrt{21})$, $(2-\sqrt{21})$, $(1+\sqrt{17})$, $(1-\sqrt{17})$

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4. Solve : $(x^4 - 7x^2 + 12) = 0$

(i) 3 , (-1) , $\sqrt[4]{3}$, $(-\sqrt[4]{3})$

(ii) 5 , 1 , $\sqrt{5}$, $(-\sqrt{6})$

(iii) 1 , (-3) , 3 , (-3)

(iv) 0 , (-4) , $\sqrt{\frac{1}{3}}$, $(-\sqrt{\frac{1}{3}})$

(v) 2 , (-2) , $\sqrt{3}$, $(-\sqrt{3})$

$\sqrt{3}$ $\sqrt{3}$

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5. Solve : $(x+6)(x+7)(x+8)(x+9) = 17160$

(i) $5, (-18)$

(ii) $4, (-19)$

(iii) $2, (-21)$

(iv) $3, (-20)$

(v) $6, (-16)$

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6. For what values of k are the roots of $(k-27)x^2 + (k+5)x + (k+50) = 0$ equal

(i) $((-\frac{173}{3}), 30)$ (ii) $((-\frac{291}{5}), 30)$ (iii) $((-\frac{291}{5}), 31)$

(iv) $((-\frac{175}{3}), 31)$ (v) $((-\frac{173}{3}), 29)$

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7. If p and q are the roots of $(x^2 - 16) = 0$, find the equation whose roots are $p + \frac{1}{q}$ and $q + \frac{1}{p}$

(i) $(16x^2 + 8x - 255) = 0$ (ii) $(16x^2 - 225) = 0$

(iii) $(8x^2 + 2x - 105) = 0$ (iv) $(16x^2 - 8x - 255) = 0$

(v) $(8x^2 + 6x - 135) = 0$

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8. If -2 is the root of $(x^2 + kx - 18) = 0$, find k and the other root

(i) $k =$ -6, and the other root = 10

(ii) $k =$ -7, and the other root = 9

(iii) $k =$ -4, and the other root = 11

(iv) $k =$ -9, and the other root = 6

(v) $k =$ -8, and the other root = 8

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9. If $ax^2 + bx + c$ is exactly divisible by $(x+6)$, $(x-6)$

and leaves a remainder of -11 when divided by $(x-5)$, find a, b and c

(i) $a = 1$, $b = 1$, $c = -35$
(ii) $a = 1$, $b = -2$, $c = -39$
(iii) $a = 1$, $b = -1$, $c = -37$
(iv) $a = 1$, $b = 3$, $c = -34$
(v) $a = 1$, $b = 0$, $c = -36$

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10. Find a and b in order that $(x^3-3x^2) + (ax+b)$ may be exactly divisible by $(x^2+3x-10)$

(i) $a = -30$, $b = 57$
(ii) $a = -27$, $b = 61$
(iii) $a = -29$, $b = 59$
(iv) $a = -26$, $b = 62$
(v) $a = -28$, $b = 60$

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11. Find the quadratic equation with roots $(\frac{3}{7}, \frac{3}{7})$

(i) $(49x^2-42x+9) = 0$

(ii) $(49x^2-28x+3) = 0$

(iii) $(49x^2-56x+15) = 0$

(iv) $(21x^2-16x+3) = 0$

(v) $(35x^2-36x+9) = 0$

Assignment Key

1) (ii)
2) (iv)
3) (iv)
4) (v)
5) (ii)
6) (iv)
7) (ii)
8) (ii)
9) (v)
10) (v)
11) (i)