

2) $(5x^3)^2 =$

a) $25x^5$

b) $5x^5$

c) $25x^6$

d) $5x^6$

3) if $q = 3, r = 2$ then $2(q + r) =$

a) 10

b) -10

c) 5

d) -5

4) $|9| - |-20| =$

a) -11

b) -29

c) 11

d) 29

5) $\frac{9^6}{9^4} =$

a) 9^2

b) 9^{-1}

c) 9^{11}

d) 9^{-2}

6) $\sqrt[5]{32} =$

a) 2

b) -2

c) 4

d) -4

7) The number of the real solution (عدد الحلول الحقيقية) of $x^2 - 6x + 1 = 0$ is

a) one

b) two

c) three

d) there are no real solution.

8) if $x^2 = 9$ then $x =$

a) ± 3

b) 3

c) -3

d) no solution

Question II:

1) Divide and write the answer in lowest term : (2 marks)

اقسمي ثم بسطي

$$\frac{8x}{5} \div \frac{11x^2}{20}$$

$1\frac{1}{2}$

$6\frac{1}{4}$
8

$\frac{8x}{5} \cdot \frac{20}{11x^2} = \frac{2 \cdot 4 \cdot x}{5 \cdot 1} \cdot \frac{4 \cdot 5}{11 \cdot x \cdot x} = \frac{8 \cdot 20}{5 \cdot 11x^2} = \frac{160}{55x^2} = \frac{32}{11x^2}$

$\frac{8x}{5} \cdot \frac{20}{11x^2} = \frac{4 \cdot 2 \cdot x}{1 \cdot 5} \cdot \frac{4 \cdot 5}{11 \cdot x \cdot x} = \frac{8 \cdot 20}{5 \cdot 11x^2} = \frac{160}{55x^2} = \frac{32}{11x^2}$

2) Solve the equations:

a) $5x + 10 = 25$

(1 marks)

$$5x + 10 = 25$$

$$5x = 25 - 10$$

$$\frac{5x}{5} = \frac{15}{5} \Rightarrow x = 3$$

b) Use the Quadratic formula استخدمى القانون العام

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

(2marks)

$$a = 4 \quad b = 4 \quad c = 1$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} = \frac{-4 \pm \sqrt{16 - 16}}{2 \cdot 4}$$

$$= \frac{-4 \pm \sqrt{0}}{8} = \frac{-4 \pm 0}{8} \Rightarrow x = ?$$

one real solution

c) $|x + 6| = 4$

(2marks)

$$x + 6 = 4$$

$$x = 4 - 6$$

$$x = -2$$

$$x - 6 = 4$$

$$x = 4 + 6$$

$$x = 10$$

3) Rationalize the denominator . انطقى المقام (1 marks)

$$\frac{2}{\sqrt{7}}$$

$$\frac{2\sqrt{7}}{\sqrt{7}\sqrt{7}} = \frac{2\sqrt{7}}{7}$$

Good Luck