ICSE - X

Topic: Quadratic Equations 4 Mark MCQ

1.

QA. One year ago, father was 8 times as old as his son. Now his age is the square of his son's age. Take age of son as x years now. **[4]**

1. What is the father's age now

a) $2x$
b) x^2
c) $(x-1)^2$
d) $x/2$

2. Which of the following the correct expression for relationship between father's age and that of his son's age one year ago

a) $8x^2 - 1 = x$
b) $8x^2 = x - 1$
c) $x-1 = 8(x^2 - 1)$
d) $8(x-1) = x^2-1$

3. Which of the following represents the simplified quadratic equation of Q 2.

a) $x^2 - 8x+7 = 0$
b) $x^2 + 8x+7 = 0$
c) $x^2 + 8x-7 = 0$
d) $x^2 - 8x-7 = 0$

4. What is the age of son

a) *1 year*
b) *5 years*
c) *7 years*
d) *8 years*

QB. An article was sold by John at ₹ 56 which cost him ₹ *x*. He finds that he gains *x*% on his cost price. **[4]**

1. What is the gain in terms of *x*

a) $100\ x/2$
b) $100\ x^2$
c) $x^2/100$
d) $(100-x)/2$

2. Identify the equation describing this transaction

a) $100\ x/2 = x - 56$
b) $x^2/100 = 56 - x$
c) $100\ x^2 = 56 - x$
d) $(100-x)/2 = x-56$

3. Which of the following represents the simplified quadratic equation of Q 2.

a) $x^2 + 100x + 5600 = 0$
b) $x^2 - 100x - 5600 = 0$
c) $x^2 - 100x + 5600 = 0$
d) $x^2 + 100x - 5600 = 0$

4. What is the value of *x*

a) ₹800
b) ₹900
c) ₹700
d) ₹600

QC. Car A travels x km for every litre of petrol, while car B travels (x + 5) km for every litre of petrol. Both cars cover a distance of 400 km each. **[4]**

1. How many litres of petrol is used by car A

a) *400x*
b) *x+5/400*
c) *400/x+5*
d) *400/x*

2. How many litres of petrol is used by car B

a) *400x*
b) *x+5/400*
c) *400/x+5*
d) *400/x*

3. If car A uses 4 litres of petrol more than car B in covering the 400 km, which of the following represents the correct equation

a) $x^2+5x - 500 = 0$
b) $x^2 - 5x - 500 = 0$
c) $x^2-5x +500 = 0$
d) $x^2-5x - 500 = 0$

4. How many litres of petrol is used by car B for the journey

a) *20 l*
b) *16 l*
c) *25 l*
d) *15 l*

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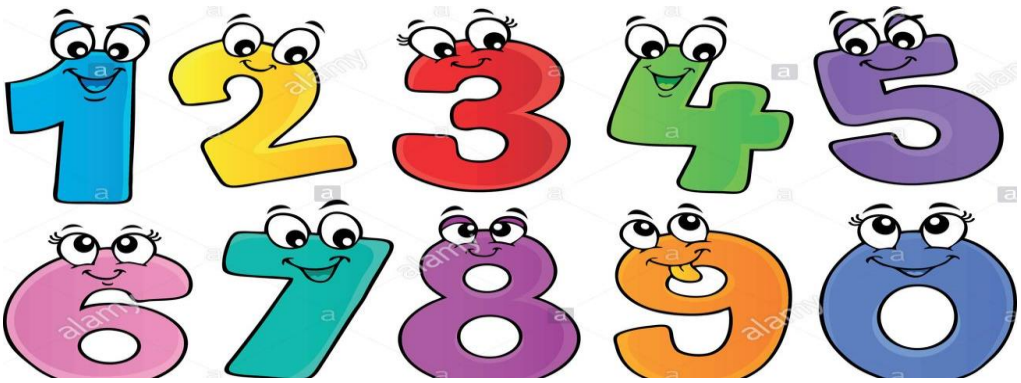

QD. A two-digit number contains the smaller of two digits in the unit's place. Condition 1- The product of the digits is 24 and Condition 2- the difference between the digits is 5. **[4]**

Take unit place digit as x

1. Which of the following is depicts the relation between the digits as per the first condition

a) *Digit at unit's place = 24 (digit at ten's place)*
b) *24 (Digit at unit's place) = Digit at ten's place*
c) *Digit at unit's place = 24 /(digit at ten's place)*
d) *Digit at unit's place/24 = (digit at ten's place)*

2. Which of the following is depicts the relation between the digits as per the second condition

a) *x- Digit at ten's place = 5*
b) *Digit at ten's place = x +5*
c) *5 – x = Digit at ten's place*
d) *Digit at ten's place- x = 5*

3. Which of the following represents the simplified quadratic equation of Q 2.

a) $x^2+ 5x+24 = 0$
b) $x^2+ 5x - 24 = 0$
c) $x^2- 5x+24 = 0$
d) $x^2- 5x-24 = 0$

4. What is the number ?

a) *38*
b) *64*
c) *83*
d) *46*

QE. The distance by road between two towns A and B is 216 km and by train is 208 km. A car travels at a speed of x km/hr. and the train travels at a speed which is 16 km faster than the car. **[4]**

1. What is the time taken by the car to reach town B from A in terms of x?

a) $216x$
b) $216/x$
c) $216-208/x$
d) $216x^2$

2. What is the time taken by the train to reach town B from A in terms of x

a) $208x$
b) $208/x$
c) $208/x+16$
d) $206/x^2+16$

3. If the train takes 2 hours less than the car, to reach tow B, which of the following is the relevant quadratic equation in x

a) $x^2+12x - 1728 = 0$
b) $x^2-12x +1728 = 0$
c) $x^2+12x + 1728 = 0$
d) $x^2-12x - 1728 = 0$

4. What is the speed of the car?

a) $48km/hr.$
b) $32km/hr.$

c) *36km/hr.*

d) *38km/hr.*

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