Rosary School \ Marj Elhamam

Name : _____

Date :   / 10 / 2025

Subject: Worksheet (2) / unit (2)

Grade : 6 (   )

Number

2.1 Rules of Divisibility

Q1: Answer the Following questions and explain your answer.

    a. Is 236 divisible by 2? _____

    b.   Is 315 divisible by 5? _____

    c. Is 432 divisible by 3? _____

    d. Is 624 divisible by 4? _____

    e. Is 777 divisible by 9? _____

    f. Is 780 divisible by 10? _____

    g. Is 96 divisible by 2 and 3? _____

Q2: Write a number divisible by 2, 3, and 5. _____

Q3: Which of these are divisible by 9? 54, 88, 81, 136, 108

Q4: A box of 120 apples must be shared equally among 10 students. Can it be divided evenly?

_____

Q5: A company prints 3,456 brochures. Can they pack them into boxes of 4 without leftovers?

_____

2.2 Factors, Multiples, and Primes

Q1: List all factors of 36. _____

Q2: List all factors of 40. _____

Q3: List the first 5 multiples of 9. _____

Q4: Write all prime numbers between 10 and 30. _____

Q5: Is 51 a prime number? Explain why.

_____

Q6: Work out the HCF of 12 and 16.

Q7: Work out the LCM of 8 and 10.

Q8: Work out the HCF and LCM of 9 and 27.

Q9: Sarah has 20 red pens and 30 blue pens.

She wants to pack them in boxes equally.

What is the greatest number of boxes she can make?

Q10: A bus stops at a station every 15 minutes, and a train stops there every 20 minutes.

They both stop at the New York station together.

After how many minutes will be the first meeting of the bus and the train in that New York station.

2.3 Positive and Negative Numbers

Q1: Arrange the following numbers in ascending order:

–4   5   –9   0   7   -2

————, ————, ————, ————, ————, ————

Smallest

Q2: Work out.

   a. $7 + -9 =$ _____

   b. $-12 - -5 =$ _____

   c. $-8 + 10 =$ _____

   d. $-9 - 3 =$ _____

   e. $9 - -4 =$ _____

   f. $+6 \times +4 =$ _____

   g. $-5 \times +3 =$ _____

   h. $+7 \times -2 =$ _____

   I. $-8 \times -5 =$ _____

   J. $-9 \times +6 =$ _____

Q3: Compare: –3 ▢ 1

Q4: Draw a ring around the smallest number.

      –7   –10   -13   - 3   0

Q5: A submarine is 60 m below sea level.
   It rises by 25 m.
   What is its new depth?

Q6: The temperature was –3°C at night and rose by 8°C during the day. What is the daytime temperature?

Q7: An elevator starts at floor 0, goes down 4 floors, then up 9 floors. What floor is it on?

Q8: A freezer temperature is –12°C. If it increases by 6°C, what is the new temperature?

2.4 Squares and Square Roots

Q1: Write the first 10 square numbers.

_____

Q2: Work out.

a. $5^2 =$ _____

b. $0.8^2 =$ _____

c. $\sqrt{64} =$ _____

d. $\sqrt{49} =$ _____

e. $\sqrt{100} \times \sqrt{81} =$ _____

f. $\sqrt{121} =$ _____

G. $(\sqrt{36})^2 =$ _____

Q3: A square garden has a side length of 12 m.
Find its area.

Q4: The area of a square is 36 cm².
Find the length of one side.

Q5: work out estimate:

a. $\sqrt{5} =$

b. $\sqrt{90} =$

2.5 More Powers and Roots.

Work out.

a. $7^2 + 0.4^2 = $ _____

b. $9^2 - 5^2 = $ _____

c. $(4 + 3)^2 = $ _____

d. $\sqrt[3]{125} =$ _____

e. $\sqrt[3]{-8} =$ _____

f. $4 \times \sqrt[3]{1000} - 20 =$ _____

g. $4 \times \sqrt[3]{64} =$ _____

h. $\dfrac{36}{4} - 15 =$ _____

I. $\dfrac{\sqrt{100}}{2} + 15 =$ _____

J. $\sqrt[3]{729} =$ _____

k. $6 \times 2^3 - 20 =$ _____

l. $4^3 + 5^2 =$ _____

m. $9 \times \sqrt[3]{8x27} =$ _____

n. $\dfrac{25}{\sqrt[3]{125}} - 2^2 =$ _____

2.6 calculations.

Q1: Write these calculations in **ascending** order:

$$\sqrt[3]{27} - 2, \quad \sqrt{25} - \sqrt[3]{8}, \quad \sqrt{16} + 5$$

_____, _____, _____

Smallest

Q2: Write these calculations in **descending** order:

$$\sqrt{49} - \sqrt[3]{8}, \quad \sqrt[3]{27} + 1, \quad \sqrt{36} - 4$$

_____, _____, _____

Largest

Q3: Work out

a. $5(9 - 3) =$ _____

b. $(12 - 7)^2 =$ _____

c. $(3 + 4 \times 2)^2 =$ _____

d. $(30 \div 5 - 2)^2 =$ _____

i. $\dfrac{\sqrt{12 + 4}}{4} =$ _____

e. $\dfrac{8 + 22}{13 - 8} =$ _____

f. $(-3)^3 =$ _____

g. $\sqrt{64} + 2 \times 6 =$ _____

h. $(20 \div 5 + 7)^2 =$ _____

j. $\sqrt{70 + 3 \times 10} =$ _____

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