

NMM Revision

1. Find the (a) sum
(b) difference
(c) product
(d) quotient

of:

- (1) 15 and 3 (2) 40 and 10 (3) 15 and 5
(4) 10^3 and 5^2 (5) 6^2 and 3^2 (6) 2^5 and 4^2

2. Copy and complete with the missing whole numbers.

$\sqrt{40}$ lies between and

$\sqrt{75}$ lies between and

$\sqrt{112}$ lies between and

3. Lowest Common Multiple: 4. Highest Common Factor:

(a) 2 , 3

(a) 24 , 32 , 48

(b) 8 , 12

(b) 15 , 20 , 35

(c) 4 , 6 , 9

(c) 24 , 36 , 42

(d) 8 , 16 , 24

(d) 18 , 24 , 39

5. Write as a PRODUCT OF PRIME FACTORS,
writing in index form. **SHOW ALL WORKING.**

(a) 48

(b) 80

(c) 140

(d) 126

(e) 315

6. Solve:

(a) $x^2 = 121$

(b) $x^2 = 36$

(c) $x^2 = 0.36$

(d) $\sqrt{x} = 9$

(e) $\sqrt{x} = 8$

(f) $\sqrt{x} = 0.8$

7. If $a = -3$, $b = 2$ and $c = 5$, evaluate:

(a) $2c - a$

(b) $c^2 + a$

(c) $3c - ab$

(d) abc

(e) $a^2 - bc$

(f) $2a^2$

(g) $12 - ac$

(h) a^2c

(i) $b^2 - c^2$

(j) $c - a^2$

(k) $a(b - c)$

(l) $b(a - c)$

(m) $\frac{c - a}{b}$

(n) $\frac{a - b}{c}$

(o) $\frac{a - c}{a + b + c}$

(p) $\frac{a^2}{b - c}$

CHAPTER 1 NUMBER

(1) For the numbers (i) 30 and 6

(ii) 2^6 and 10^3

find the

(a) sum (b) difference (c) product (d) quotient on dividing

Set out all appropriate working!

(2) State the lowest common multiple of

(a) 4 and 6 (b) 8 and 10 (c) 6 and 9 (d) 3, 4 and 5

(3) State the highest common factor of

(a) 18 and 24 (b) 15 and 35 (c) 36 and 60 (d) 6, 12 and 18

(4) Solve for x

(a) $x^2 = 81$ (b) $x^2 = 49$ (c) $\sqrt{x} = 4$ (d) $\sqrt{x} = 10$

(5) If $a = -3$, $b = -2$ and $c = 4$, evaluate

(a) $ab - c$ (b) $2a - b$ (c) $c + 3b$ (d) a^2c

Set out all appropriate working!

(6) Write the following as a product of prime factors

eg $120 = 2^3 \times 3 \times 5$

(a) 90 (b) 105 (c) 260 (d) 360

Set out all appropriate working!

(7) In each case state the two whole numbers the roots lie between

(a) $\sqrt{37}$ (b) $\sqrt{87}$ (c) $\sqrt{133}$ (d) $\sqrt{163}$

CHAPTER 1 NUMBER

- (1) For the numbers (i) 30 and 6 (ii) 2^6 and 10^3 find the
(a) sum (b) difference (c) product (d) quotient on dividing

Set out all appropriate working!

- (2) State the lowest common multiple of

- (a) 4 and 6 (b) 8 and 10 (c) 6 and 9 (d) 3, 4 and 5

- (3) State the highest common factor of

- (a) 18 and 24 (b) 15 and 35 (c) 36 and 60 (d) 6, 12 and 18

- (4) Solve for x

- (a) $x^2 = 81$ (b) $x^2 = 49$ (c) $\sqrt{x} = 4$ (d) $\sqrt{x} = 10$

- (5) If $a = -3$, $b = -2$ and $c = 4$, evaluate

- (a) $ab - c$ (b) $2a - b$ (c) $c + 3b$ (d) a^2c

Set out all appropriate working!

- (6) Write the following as a product of prime factors

eg $120 = 2^3 \times 3 \times 5$

- (a) 90 (b) 105 (c) 260 (d) 360

Set out all appropriate working!

- (7) In each case state the two whole numbers the roots lie between

- (a) $\sqrt{37}$ (b) $\sqrt{87}$ (c) $\sqrt{133}$ (d) $\sqrt{163}$

- (8) Which of the following are prime?

- (a) 37 (b) 87 (c) 133 (d) 163

Set out all appropriate working!

Give a reason for your answer.

NMM Revision

1. Find the (a) sum
(b) difference
(c) product
(d) quotient

of: 18,12,45,5 50,30,400,4 20,10,75,3

(1) 15 and 3 (2) 40 and 10 (3) 15 and 5

(4) 10^3 and 5^2 (5) 6^2 and 3^2 (6) 2^5 and 4^2

1025,975,25000,40 45,27,324,4 48,16,512,2

2. Copy and complete with the missing whole numbers.

(a) $\sqrt{40}$ lies between 6 and 7

(b) $\sqrt{75}$ lies between 8 and 9

(c) $\sqrt{112}$ lies between 10 and 11

3. Lowest Common Multiple: 4. Highest Common Factor:

6 (a) 2, 3

8 (a) 24, 32, 48

24 (b) 8, 12

5 (b) 15, 20, 35

36 (c) 4, 6, 9

6 (c) 24, 36, 42

48 (d) 8, 16, 24

3 (d) 18, 24, 39

5. Write as a PRODUCT OF PRIME FACTORS,
writing in index form. **SHOW ALL WORKING.**

(a) 48

(b) 80

(c) 140

(d) 126

(e) 315

$2^4 \times 3$

$2^4 \times 5$

$2^2 \times 5 \times 7$

$2 \times 3^2 \times 7$

$3^2 \times 5 \times 7$

6. Solve:

(a) $x^2 = 121$ $x = 11$ (b) $x^2 = 36$ $x = 6$ (c) $x^2 = 0.36$ $x = 0.6$
(d) $\sqrt{x} = 9$ $x = 81$ (e) $\sqrt{x} = 8$ $x = 64$ (f) $\sqrt{x} = 0.8$ $x = 0.64$

7. If $a = -3$, $b = 2$ and $c = 5$, evaluate:

(a) $2c - a$ 13 (b) $c^2 + a$ 22 (c) $3c - ab$ 21 (d) abc -30
(e) $a^2 - bc$ -1 (f) $2a^2$ 18 (g) $12 - ac$ 27 (h) a^2c 45
(i) $b^2 - c^2$ -21 (j) $c - a^2$ -4 (k) $a(b - c)$ 9 (l) $b(a - c)$ -16
(m) $\frac{c - a}{b}$ 4 (n) $\frac{a - b}{c}$ -1 (o) $\frac{a - c}{a + b + c}$ -2 (p) $\frac{a^2}{b - c}$ -3

CHAPTER 1 NUMBER

(1) For the numbers (i) 30 and 6 **36, 24, 180, 5**

(ii) 2^6 and 10^3 **1064, 936, 64000, 0.064**
find the **64 1000**

(a) sum (b) difference (c) product (d) quotient on dividing

Set out all appropriate working!

(2) State the lowest common multiple of

(a) 4 and 6 **12** (b) 8 and 10 **40** (c) 6 and 9 **18** (d) 3, 4 and 5 **60**

(3) State the highest common factor of

(a) 18 and 24 **6** (b) 15 and 35 **5** (c) 36 and 60 **12** (d) 6, 12 and 18 **6**

(4) Solve for x

(a) $x^2 = 81$ **$x = 9$** (b) $x^2 = 49$ **$x = 7$** (c) $\sqrt{x} = 4$ **$x = 16$** (d) $\sqrt{x} = 10$ **$x = 100$**

(5) If $a = -3$, $b = -2$ and $c = 4$, evaluate

(a) $ab - c$ **2** (b) $2a - b$ **-4** (c) $c + 3b$ **-2** (d) a^2c **36**

Set out all appropriate working!

(6) Write the following as a product of prime factors

eg $120 = 2^3 \times 3 \times 5$

(a) 90 **$2 \times 3^2 \times 5$** (b) 105 **$3 \times 5 \times 7$** (c) 260 **$2^2 \times 5 \times 13$** (d) 360 **$2^3 \times 3^2 \times 5$**

Set out all appropriate working!

(7) In each case state the two whole numbers the roots lie between

(a) $\sqrt{37}$ **6,7** (b) $\sqrt{87}$ **9,10** (c) $\sqrt{133}$ **11,12** (d) $\sqrt{163}$ **12,13**