Grade 8 Revision on 10 Feb

Tuesday, 10 February 2026 11:09

Term 1 - FIRST Rev...

Grade 8 Mathematics

Revision Workshop on 10th February 2026

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SHAYA IZIBALO MATHS INSTITUTE

NAME:

NAME: _____

1. Simplify, remembering BODMAS!

a. $3+2\times6$

$=3+12$

$=15$

b. $6+8\div2$

$=6+4$

$=10$

$\frac{12}{3}=4$

$12=3\times4$

c. $(3+2)(7-5)$

$=(5)(2)$

$=10$

d. $4\div(6-(4+2))$

$=4\div(6-6)$

$=4\div0$

$=$ undefined

$\frac{4}{0}$ undefined

$\frac{0}{4}=0$

e. $2\times3^2-5\sqrt{4}$

$=2\times9-5.(2)$

$=18-10$

$=8$

f. $\sqrt[3]{8}+(5-3)^3$

$=2+2^3$

$=2+8$

$=10$

$\frac{4}{0}=\square$

$0\times\square=4$

2. Give the first three multiples of:

a. 4

$=4;8;12$

b. 5

$=5;10;15$

c. 10

$=10;20;30$

d. 11

$=11;22;33$

3. Give all the factors of:

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a. 16

1; 2; 4; 8; 16

b. 24

1; 2; 3; 4; 6; 8; 12; 24

c. 25

1; 5; 25

d. 60

1; 2; 3; 4; 5; 6; 10; 12; 15; 20; 30; 60

e. 100

1; 2; 4; 5; 10; 20; 25; 50; 100

5. Calculate the following without a calculator:

a. 498 + 37

$= 498 + 2 + 37 - 2$

$= 500 + 35 = 535$

b. 99 × 53

$= 100 \times 53 - 53$

$= 5300 - 53 = 5247$

c. 102 × 63

$= 100 \times 63 + 2 \times 63$

$= 6300 + 126 = 6426$

d. 50 × 19 × 20

$= 50 \times 20 \times 19$

$= 5 \times 10 \times 2 \times 10 \times 19 = 19000$

e. 27 × 999

$= 1000 \times 27 - 27$

$= 27000 - 27 = 26973$

f. 560 – 277

$= 3 + 20 + 200 + 60$

$= 3 + 20 + 200 + 60$

$= 283$ ✓

6. Cross out the incorrect statements in each case:

To find the **lowest common multiple (LCM)** of numbers in prime factored form we:

write down **ALL** the bases	OR	we write down **only the common** bases

and then we

take the **lowest** occurring power of each	OR	take the **highest** occurring power of each

To find the **highest common factor (HCF)** of numbers in prime factored form we:

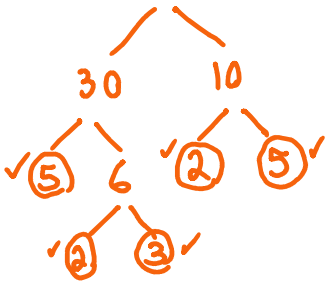
write down **ALL** the bases	OR	we write down **only the common** bases

and then we

take the **lowest** occurring power of each	OR	take the **highest** occurring power of each

7. Prime factorise the following numbers:

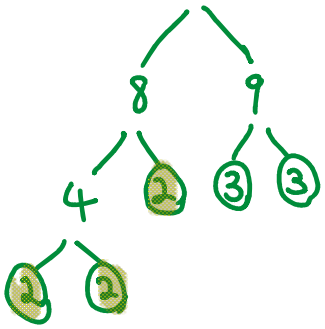
a. 300



$300 = 2 \times 2 \times 3 \times 5 \times 5$

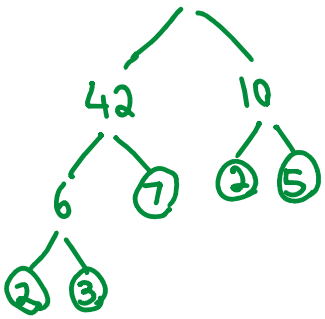
$= 2^2 \times 3 \times 5^2$

b. 72



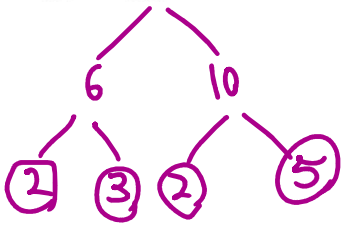
$72 = 2^3 \times 3^2$

c. 420



$420 = 2^2 \times 3 \times 5 \times 7$

d. 60



$60 = 2^2 \times 3 \times 5$

8. Use your answers to question 3 to find: $300 = 2^2 \times 3^1 \times 5^2$ $72 = 2^3 \times 3^2$

a. The HCF (highest common factor) of 300 and 72

$HCF = 2^2 \times 3^1 = 12$

5 ×

b. The LCM (lowest common multiple) of 60 and 72 $60 = 2^2 \times 3 \times 5$ $72 = 2^3 \times 3^2$

$LCM = 2^3 \times 3^2 \times 5 = 360$

$LCM = 2^3 \times 3^2 \times 5 = 360$

c. The HCF (highest common factor) of 420 and 60

$60 = 2^2 \times 3 \times 5$

$420 = 2^2 \times 3 \times 5 \times 7$

$HCF = 2^2 \times 3^1 \times 5^1 = 60$

d. The LCM (lowest common multiple) of 60 and 300

$60 = 2^2 \times 3^1 \times 5^1$

$300 = 2^2 \times 3^1 \times 5^2$

$LCM = 2^2 \times 3^1 \times 5^2$

$= 300$

e. The HCF (highest common factor) of 60, 72, 300 and 420

$HCF = 2^2 \times 3^1 = 12$

f. The LCM (lowest common multiple) of 60, 72, 300 and 420

$LCM = 2^3 \times 3^2 \times 5^2 \times 7$

$= 12600$

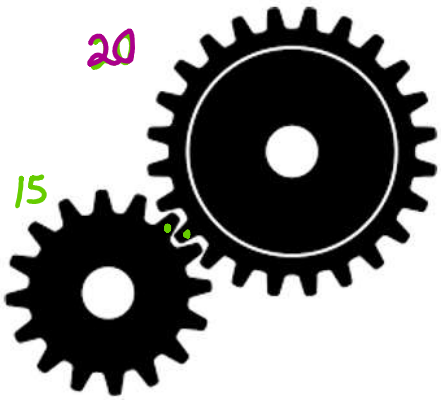
9. Two cogs are turning; one has 20 teeth, and one has 15 teeth. After how many turns of the smaller cog will they both be back in their starting positions?

15; 30; 45; 60; 75; ..... 4 turns

20

15; 30; 45; 60; 75; ..... 4 turns

20; 40; 60; 80 3 turns



10. Toffees come in packets of 18, lollipops in packets of 24 and fizzers in packets of 10. What is the smallest number of packets of each I must buy to have an equal number of each type of sweet?

toffees $18 = 2 \times 3^2$ (20 pkts)

lollipops $24 = 2^3 \times 3$ (15 pkts)

fizzers $10 = 2 \times 5$ (36 pkts)

$LCM = 2^3 \times 3^2 \times 5 = 360$

11. Find the lowest common multiple of 3, 4 and 10.

3

$4 = 2^2$

$10 = 2 \times 5$

$LCM = 2^2 \times 3 \times 5$

$= 60$

$\frac{4}{10} = \frac{8}{20} = \frac{800}{2000}$

$\downarrow$

$\frac{2}{5}$

Use this to calculate: $\frac{1}{3} + \frac{1}{4} + \frac{3}{10}$

$= \frac{20}{60} + \frac{15}{60} + \frac{18}{60}$

$= \frac{53}{60}$

R3 +$5

3cm + 1mm

12. Find the following by prime factoring:

$\sqrt{324}$ $324 = 2^2 \times 3^4$

$324 = (2\times3\times3)(2\times3\times3)$

$\sqrt{324} = 2\times3\times3$

$= 18$

$\sqrt[3]{216}$ $216 = 2^3 \times 3^3$

$216 = (2\times3)(2\times3)(2\times3)$

$\sqrt[3]{216} = 2\times3 = 6$

13. $36\,000 = 2^5 \times 3^2 \times 5^3$. What is the smallest number we can multiply 36000 by to get:

a. a perfect square?

b. a perfect cube?

$36\,0000 = (2\times2\times2\times3)(2\times2\times3\times5^{5\times5})$

10

$36000 = (2^2\times3\times5)(2^2\times3\times5)(2\times5^{3\times2})$

6

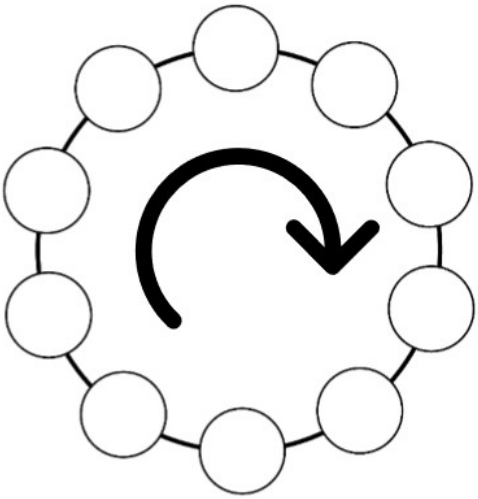
14. Mr Zungu can divide a group of children into groups of 3, 5 or 7 without having anyone left over. What is the smallest number of children for which this is possible?

LCM of 3, 5 and 7

$3\times5\times7 = 105$

35 groups of 3

35 groups of 3
21 groups of 5
15 groups of 7



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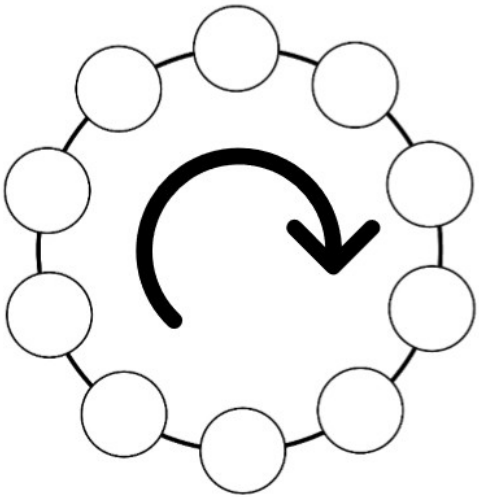

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