Grade 8 Worksheet 1 page 2

1. Learners read the cartoon and discuss it.
2a. A number line that starts at 1.
b. A number line that starts at 0.
c. A number line with positive and negative numbers.
d. 1, 2, 3, 4…
e. 0, 1, 2, 3…
f. -3, -2, -1, 0, 1, 2, 3
3a. Natural, whole, integer b. Integer
c. Integer d. Natural, whole, integer
e. Natural, whole, integer
4a. Natural b. Whole
c. Integers d. Positive: 1, 2, 3, 4
Negative: -4, -3, -2, -1
5. **Big oval**: Integers
Middle oval: Natural numbers
Small oval: whole numbers
6. Rational numbers, irrational numbers, Real numbers

Grade 8 Worksheet 2a page 4

1a. 10 = 10 b. 12 = 12
c. 16 = 16
2a. m + n + p = m + n + p
b. x + y + z = x + y + z
c. c + d + e = c + d + e
3a. 50 = 50 b. 20 = 20
c. 63 = 63
4a. xc = cx b. mn = nm
c. pg = gp
5a. 16 = 16 b. 25 = 25
c. 19 = 19

Grade 8 Worksheet 2b page 6

6a. x + y + z = x + y + z b. r + s + t = r + s + t
c. d + e + f = d + e + f
7a. 36 = 36 b. 56 = 56
8a. cde = cde b. $x$yz = $x$yz
9a. 24 = 24 b. 30 = 30
c. 33 = 33
10a. mn +mp = mn + mp b. dg + dh = dg + dh
c. rs + rt = rs + rt
11a. 3,5 + 0 = 3,5
3,5 x 1 = 3,5 b. 56 + 0 = 56
56 x 1 = 56
c. $\frac{1}{5} + 0 = \frac{1}{5}$
$\frac{1}{5} \times 1 = \frac{1}{5}$

Grade 8 Worksheet 3 page 8

1. Answers possibly differ. E.g. A factor is a number that divides exactly into another number.
2a. 1, 2, 4, 8 b. 1, 2, 3, 4, 6, 8, 12, 24
c. 1, 3, 7, 21
3. Answers possibly differ. E.g. Prime numbers are numbers that are divisible by only 1 and itself.
4a. Factors: 1, 2, 3, 6 and 1, 2, 3, 4, 6, 12
CF: 1, 2, 3, 6 and HCF: 6
b. Factors: 1, 7 and 1, 2, 4, 7, 12, 28
CF: 1, 7 and HCF: 7
c. Factors: 1, 3, 9 and 1, 2, 3, 4, 6, 9, 12, 18, 36
CF: 1, 3, 9 and HCF: 9
d. Factors: 1, 2, 4, 8 and 1, 2, 3, 4, 6, 8, 12, 24
CF: 1, 2, 4, 8 and HCF: 8
e. Factors: 1, 3 and 1, 3, 7, 21
CF: 1, 3 and HCF: 3
5. Highest common factor.
6a. HCF: 15 b. HCF: 16 c. HCF: 7
d. HCF: 8
7a. HCF: 2x2x2 = 8 b. HCF: 2x2x2x2x2 = 32
c. HCF: 2x2x2 = 12 d. HCF: 2x2x2 = 8

Grade 8 Worksheet 4 page 10

1a. $\frac{a^2}{4} + \frac{a^2}{32}$ b. $\frac{7x^2 + 3a^2}{10}$

Grade 8 Worksheet 5 page 12

1a. HCF: 2x2 = 4

c. $\frac{5y^2+y^2}{6}$ 2a. $11\frac{3}{4}\ a^2$ b. $\frac{103y^2}{10}$ - 2 c. $-4x^2-14x^4$	b. HCF: 5x5 = 25 c. HCF 2x2 = 4 d. HCF: 13x2 = 26 e. HCF: 5x5 = 25 f. HCF: 2x2x3 = 12 2a. LCM: 2x2x2x2x2x2x2 = 256 b. LCM: 3x3x3x3x3x3 = 729 c. LCM: 5x5x5x5 = 625 d. LCM: 5x5x2x2x2x5 = 1000 e. LCM: 5x5x3x3x3 = 675 f. LCM: 2x3x3x3x3x3 = 486
Grade 8 Worksheet 6 page14	**Grade 8 Worksheet 7 page 16**
1. R35 profit 2. R35 100 3. R741 4. R1,064 5. R135,40	1. Yes. All together you pay R192 for the month. 2. Learner's own answers by completing the budget below. Errata- Wk7 Q2. Savings should not be included into expenses but rather added to your income. 3. R480 4. Movies – R25 Airtime – R60 Cold drink – R8 Chips – R3 Total – R96
Grade 8 Worksheet 8 page 18	**Grade 8 Worksheet 9 page 20**
1. R1673 2a. R5,60 b. R2105, 60 3. R5784,00 4.3,2% 5a. 12% b. R655 c. R127	1. Reading through instructions on how to calculate hire purchase payments. 2. R445,8 3a. R3500 p/month b. R70 000 c. R230 000
Grade 8 Worksheet 10 page 22	**Grade 8 Worksheet 11 page 24**
1. R13,96 2. 12,60 CAD 3. 66,8 AUD 4. 12,65 AUD, he has enough	1. Learner's own answers by completing the number lines. 2. Learner's own answers by completing the number lines from the first interval to the last interval. 3. Learner's own answers by completing the following. 4a. 9^{th} term, previous number +1 b. 6^{th} term, previous number + 2 c. 5^{th} term, minus square numbers starting at the

	last number. 5a. (0), previous number +2 b. (-3), previous number +3 c. (-60), previous number +5 6a. (-1), previous number +1 b. (-10), previous number +2 c. (-4), previous number +3 d. (-54), previous number +5 e. (-46), previous number +4 f. (-21), previous number +7 7a. -6, -4, -2, 0, 2, 4, 6 b. -24, -16, -8, 0, 8, 16, 24 c. -55, -15, 10, -5, 5, 10, 15, 55 d. -300, -200, -150, -100, -50, 0 8a. > b. < c. < d. < e. < f. >
Grade 8 Worksheet 12 page 26	Grade 8 Worksheet 13 page 28
1a. -5 b. 5 c. -14 d. -12 e. 11 f. 5 2a. 40 b. -2 c. -0,5 d. 1 e. 165 f. -1 3a. 16 b. -6 c. 1 d. 16 e. 3 f. Answers possibly differ.	1a. 2 b. 2 c. 8 d. 19 e. -42 f. Answers possibly differ. 2a. -2 or 6 b. -9 or 8 c. -2 or 3 d. -8 or 17 e. -5 or -5 f. Answers possibly differ. 3a. -5 b. -7 c. 8 d. -9 e. -3 4a. 8 b. -7 c. 5 d. 6 e. 4 5a. 4, 4, -4, -4 b. 1, 1, -1, -1 c. 144, 144, -144, -144 d. 49, 49, -49, -49 e. 16, 16, -16, -16 f. 25, 25, -25, -25
Grade 8 Worksheet 14 page 30	Grade 8 Worksheet 15 page 32
1a. 4 b. 49 c. 16 d. 36 e. 100 f. 81 2a. 8 b. 1 c. 64 d. 27 e. 27 3a. 4913 b. 2744 c. 4096 d. 216 e. 343 f. 512 4a. 8^2 b. 3^2 c. 5^2 d. 10^2 e. 6^2 f. 2^2	1b. $8^2 = 64$ c. $9^2 = 81$ d. $10^2 = 100$ e. $11^2 = 121$ f. $16^2 = 256$ g. $21^2 = 441$ h. $34^2 = 1156$ i. $48^2 = 2304$ j. $57^2 = 3249$ 2a. Positive b. Positive c. Positive d. Positive 3a. g^5 b. $a^2 \times b^2$

5a. 3^3 b. 2^3 c. 5^3 6a. $5^3 + 5^2$ b. $4^3 + 5^3$ c. $1^3 + 3^2$ d. $1^3 + 9^2$ e. $5^2 + 6^2$ 7a. 30^5 b. 40^{11} c. 60^4 d. 70^8 e. 90^3 f. 200^4 8a. x b. a c. 12 d. 7 e. 47	c. z^2 x c^3 d. d^2 x s^3 4a. 8 b. 5 c. 1 d. 9 e. 7 f. 11 5a. 6 b. 12 c. 18 d. 36
Grade 8 Worksheet 16 page 34	
1a. True b. False c. False d. True e. False f. True 2a. 2 b. 3 c. 4 d. 5 e. 6 f. 8 g. 10 h. 7 i. 9 j. 11 3a. $3\sqrt{3}$ b. $6\sqrt{6}$ c. $8\sqrt{8}$ d. $9\sqrt{9}$ e. $5\sqrt{5}$ f. $4\sqrt{4}$ g. $9\sqrt{3}$ h. 32 i. $49\sqrt{7}$ i. 181.02 4a. $2\sqrt{3}$ b. $3\sqrt{5}$ c. $2\sqrt{7}$ d. $2\sqrt{5}$ e. $2\sqrt{6}$ f. $3\sqrt{2}$ 5a. 25, $\sqrt{25}$ b. 81, $\sqrt{81}$ c. 49, $\sqrt{49}$ d. 4, $\sqrt{4}$ e. 1000, $\sqrt{1000}$ f. 6, 6^2 g. 9, 9^2 h. 25, 25^2 i. 1, 1^2 j. 2, 2^3 k. Answers possibly differ.	