NAME: _____

Student Worksheet

Activity One

a) Calculate the following.

i) 17 + 8 x 2 =

ii) 20 + 2 – 5 =

iii) 10 + 6 ÷ 2 =

iv) 3 x 3 x 2 =

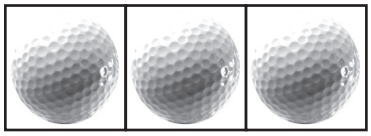
v) 7 + 8 – 6 =

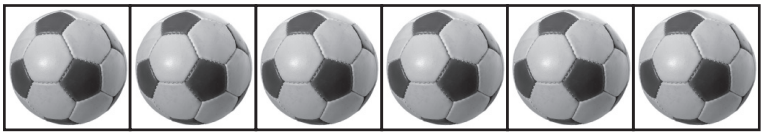
vi) 12 ÷ 2 + 2 =

b) On the number line below, circle the number which represents six degrees below zero.

-9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9

c) Write 2 mathematical sentences using these 2 groups of balls.





_____

_____

d) Evaluate each expression

i) Let a = 4, 21 + a =

ii) Let b = 0, 0 – b =

iii) Let c = 9, 18 ÷ c =

iv) Let d = 15, 12 + d – 8 =

v) Let e = 10, 140 ÷ e + e^2 =

vi) Let f = –2, 18 ÷ f =

vii) Let g = 0.5, g x 2.5 =

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Student Worksheet

Activity Two

a) Continue the pattern shown in the chart below.

1	2	(3)	4	5	6	7	8	(9)	10
11	12	13	14	(15)	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

b) Solve.

i) 31 – 11 = 12 + _____

ii) 99 – 19 = 10 + _____

iii) 94 + _____ = 46 + 54

iv) 4 x 4 = 20 – _____

c) Continue the following patterns.

i)  _____ _____

ii)  _____ _____ _____

d) Find each quotient.

i) –21 ÷ 3 =

ii) 70 ÷ –7 =

iii) 42 ÷ 6 =

iv) –9 ÷ 3 =

e) Simplify these expressions.

i) –10a + 4a =

ii) –5b – 2b + 3b =

iii) –2c – (–c) =

iv) 30d – 19d =

v) 3e x 4e =

vi) –71f – (–24f) =

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Activity Three

a) Calculate the following.

i) $(15 + 5) \div 4 =$

ii) $(16 - 12)^2 =$

iii) $(21 \div 7) + 30 =$

iv) $16 + (8 + 1)^2 =$

b) Write each as an algebraic expression.

i) The difference of 15 and 9 _____

ii) ***x*** increased by 10 _____

iii) The product of ***y*** and 3 _____

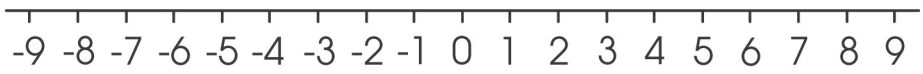
iv) The sum of 12 and ***z*** _____

c) Write the next numbers in the following patterns.

i) 122, 137, 152, _____, _____

ii) 77, _____, 61, 53, _____

d) Graph a > –2 on the number line.



e) If x = 7, solve these equations.

i) $x^2 + 3 =$

ii) $x(5 \times 2) =$

iii) $x^2 + x \div 7 =$

iv) $21 \div x + 4 =$

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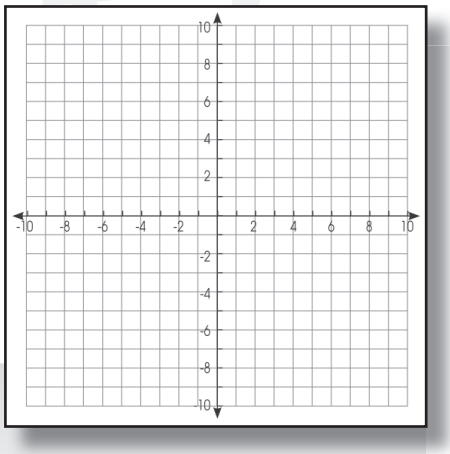
Student Worksheet

Activity Four



a) Plot the following coordinates on the accompanying grid:

A = (1, 3) B = (8, –3)

C = (–9, –9) D = (0, –9)

b) Calculate the following.

i) $(26 + 11) - (2 + 4)^2 =$

ii) $3(1 + 8) + 2(6 - 4) =$

iii) $(7 + 2)^2 + (3 + 5)^2 =$

iv) $60 - 28 + (11 - 3 + 6) =$

v) $12 + (3 \times 2) \div 3 =$

vi) $2(7 \times 7) =$

c) Simplify these expressions.

i) $-3a + 12a =$

ii) $-4b + 7b - 2b =$

iii) $12c + 4c - c =$

iv) $9^2 - 21 =$

d) On the following graph, cite the coordinates for the four objects indicated.

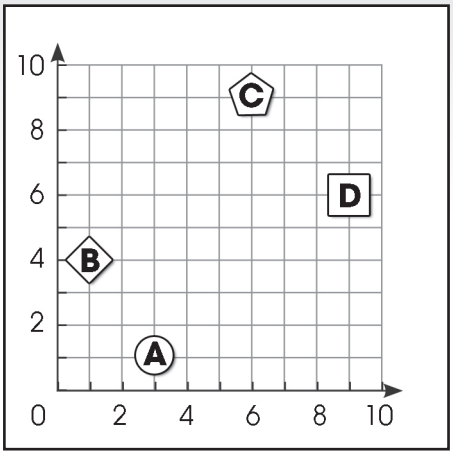
Coordinates:

A = _____

B = _____

C = _____

D = _____

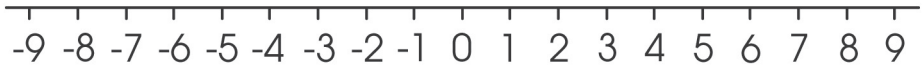


NAME: _____

Student Worksheet

Activity Five

a) Graph a > –1 on the number line.



b) How would you show the following pattern using letters?

i. ABA ii. BAB iii. AAB iv. ABB

c) Write the next numbers in the following patterns.

i) 176, 184, 192, _____, _____ ii) –9, _____, –31, –42, _____

d) Find each sum.

i) (–12) + 8 = ii) (–6) + (–9) =

iii) 15 + (–9) + 7 = iv) 17 – (–7) + 4 – (–3) =

e) Evaluate each using the values given.

i) $a^2 + b^2$; use ***a*** = 3 and ***b*** = 2 _____

ii) 5c – 6d; use ***c*** = 5 and ***d*** = 1 _____

iii) $2e \div f^2$; use ***e*** = 25 and ***f*** = 5 _____

iv) $2g \times h^2$; use ***g*** = 4 and ***h*** = 2 _____

v) $k^3 + m$; use ***k*** = 2 and ***m*** = 10 _____

vi) $z \div b^2$; use ***z*** = 12 and ***b*** = 2 _____

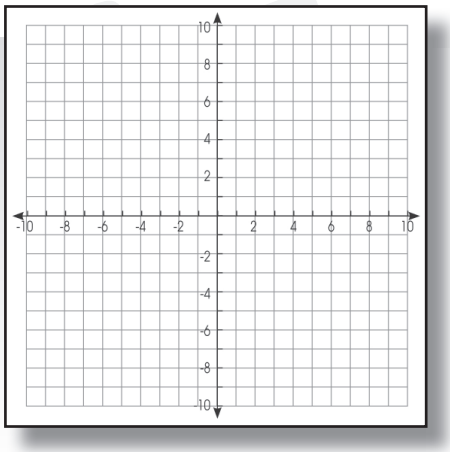
vii) 7q + 3g; use ***q*** = 3 and ***g*** = 2 _____

NAME: _____

Student Worksheet

Activity Six

a) Plot the following coordinates on the accompanying grid:



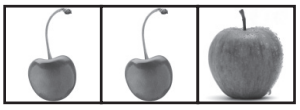
A = (5, 4) B = (6, –2)

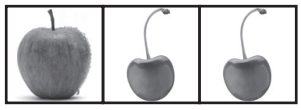
C = (–7, –6) D = (0, 8)

b) What 3 items would be next in the following pattern?

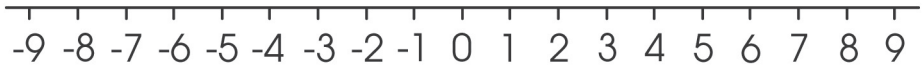
i. 

ii. 

iii. 

iv. 

c) Graph w ≤ 7 on the number line.



d) Solve each equation.

i) 16 = 12 + a ii) 9 – b = 3

iii) 22 + c = 43 iv) –14 + d = –6

v) e + 11 = –10 vi) f – 3 = 9

vii) 11 = g ÷ 3 viii) –12h = –96

ix) 4(i + 4) = 24 x) 60 – j^2 = 35

1.

a) i) 33 ii) 17
iii) 13 iv) 18
v) 9 vi) 8

b) –6 would be indicated.

c) Answers may vary: 3 + 6 = 9, 6 + 3 = 9

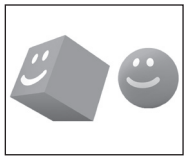
d) i) 25 ii) 0
iii) 2 iv) 19
v) 114
vi) –9 vii) 1.25

2.

a) 21, 27, 33, 39, 45

b) i) 8 ii) 70
iii) 6 iv) 4

c)

i) 

ii) 

d) i) –7 ii) –10
iii) 7 iv) –3

e) i) –6a ii) –4b
iii) –1c iv) 11d
v) $12e^2$ vi) –47f

3.

a) i) 5 ii) 16
iii) 33 iv) 97

b) i) 15 – 9

ii) x + 10

iii) 3y

iv) 12 + z

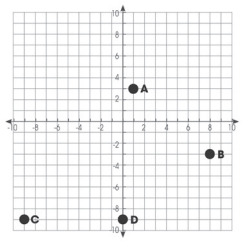
c) i) 167, 182 ii) 69, 45

d) Label from –1 to 9 on the number line.

e) i) 52 ii) 70
iii) 50 iv) 7

4.

a)



b) i) 1 ii) 31

iii) 145 iv) 46

v) 14 vi) 98

c) i) 9a ii) 1b
iii) 15c iv) 60

d) A = 3, 1
B = 1, 4
C = 6, 9
D = 9, 6

5.

a) Label 0 to 9 on the number line.

b) iv.

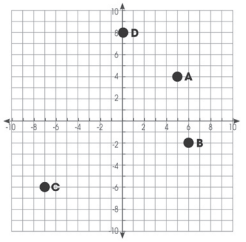
c) i) 200, 208
ii) –20, –53

d) i) –4 ii) –15
iii) 13 iv) 31

e) i) 13
ii) 19
iii) 2
iv) 4
v) 18
vi) 3
vii) 27

6.

a)



b) ii.

c) Label from 7 to –9 on the number line.

d) i) a = 4 ii) b = 6
iii) c = 21 iv) d = 8
v) e = –21 vi) f = 12
vii) g = 33 viii) h = 8
ix) i = 2 x) j = 5

(these answers are for the 6 free bonus pages, see page 3 for download instructions)