YEAR 7 END TERM 1 REVISION 3

99 marks from 99 questions

Question 1

$p \times 6$ should be written as: a. $p\,6$ b. $6\,p$ c. p^{6}

Question 2

$6\,p$ means: a. $6 + p$ b. $60 + p$ c. $6 \div p$ d. $6 \times p$

Question 3

$7\,m - 3\,n + 2$

How many ***terms*** are there in this expression?

☐

Question 4

When you triple w the answer is ☐ w.

Question 5

There are k counters in each cup.

How many counters are there altogether?

a. $8\,k$ b. $3\,k + 5$ c. $8 + k$ d. $5\,k + 3$

Question 6

The variable k can be used to stand for: a. the word 'counter' b. the number of counters in a cup

Question 7

There are k counters in each cup.

If four loose counters are removed, how many counters are left?

$3\ k +$ ☐

Question 8

If there are p paperclips in each envelope, how many paperclips are there altogether?

☐ $p +$ ☐

Question 9

Sofia thinks of a number t. She multiplies her number by 7.

Her new number is ☐ t.

Question 10

If $a = 3$, then:

$2\ a\ =$ ☐

Question 11

Enter the missing whole number in the answer.

If $a = 3$ and $b = 5$, then:

$2\ a + b =$ ☐

Question 12

Tarek is using Newton's second law, $F = ma$
His list of values is:

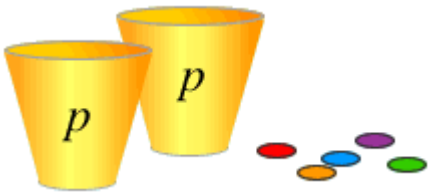
$m = 60$
$a = 2$

Use these values to calculate F .

Question 13

Substituting $r = 5$ and $m = 8$, evaluate $r + m$. $r + m =$

Question 14



There are $2\ p + 5$ counters in the picture.

If $p = 25$, how many counters are there?

Question 15

If $k = 8$, evaluate:

$\frac{1}{4}\ k =$

Question 16

When $n = 4$ and $p = 2$, then: $n + p =$

Question 17

When $n = 4$ and $p = 2$, then: $n - p =$ [ ]

Question 18

Simplify $5\ k + 2\ k + 3$. $5\ k + 2\ k + 3 =$ [ ] $k +$ [ ]

Question 19

In the expression the $5\ k + 2\ k + 3$, you cannot add the constant 3 to any other term because it is:

a. like the other terms b. unlike the other terms

Question 20

True or false?

$7\ k$ and 3 are like terms.

a. ○ True

b. ○ False

Question 21

$3\ ab$, $\frac{6ab}{5}$, $2\ ba$ are like terms

They are:

a. ○ *a* terms

b. ○ *b* terms

c. ○ *ab* terms

Question 22

When adding or subtracting in algebra, you can collect: a. any terms b. only like terms

c. unlike terms if they have the same number in front d. terms containing different variables

Question 23

How many terms are in this algebraic expression?

$m^2 - 2m + 3a + y$

There are ☐ terms.

Question 24

True or false?

$7a$, $3b$, $-4ab$ are all like terms.

a. True b. False

Question 25

What are the like terms in the expression $5k + 2k + 3$?

$5k$ and ☐

Question 26

To expand an algebraic expression: a. add all the like terms

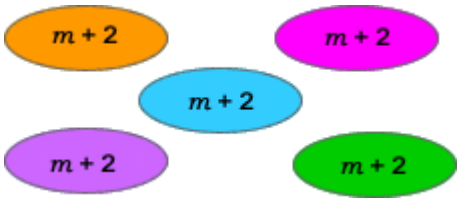
b. multiply the terms in brackets by the term outside c. substitute a number for the variable

Question 27

Complete this expansion.

$2(3y - 7) = 6y -$ ☐

Question 28



Five groups of $m + 2 = 5($☐$ + 2)$

Question 29

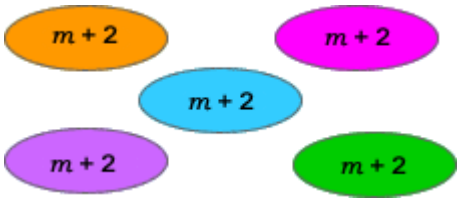
When you expand an algebraic expression, multiply:

a. *only* the first term inside the brackets by the term outside

b. *only* the last term inside the brackets by the term outside

c. each term inside the brackets by the term outside

Question 30



Five groups of $m + 2 =$ ☐ $m + 10$

Question 31

In algebra, *expand* means: a) to multiply b) to remove brackets c) to go further than last time

Question 32

Complete this sentence.

5×31 is the same as $5 \times$ ☐ $+ 5 \times$ ☐

Question 33

Complete this expansion.

$2(3y - 7) =$ ☐ $- 14$

Question 34

True or false?

You can use a variable to stand for an unknown number in a mathematical sentence.

a. True b. False

Question 35

Select the true equation.

a. ○ 5×3

b. ○ $5 \times 3 = 15$

c. ○ $5 + 3$

d. ○ $5 + 3 = 15$

Question 36

Solve the equation.

$x - 8 = 17$

$x =$ ☐

Question 37

True or false?

When you solve equations you find the values of the unknown number that make the statements true.

a. True b. False

Question 38

If $3x = 24$, $x =$ ☐

Question 39

You solved the linear equation $2m + 1 = 3$ and found that $m = 1$.

To check your answer, you could:

a. substitute 1 for m to see if $2 \times 1 + 1$ equals 3 b. substitute 3 for m to see if $2 \times 3 + 1$ equals 3

c. not substitute any number for m to see if you are correct.

Question 40

Solve this equation.

$3x = 15$

$x =$ ☐

Question 41

8 boxes have the same mass. The total mass of the boxes is 12 kg.

Which of these equations represents this problem?

a. ○ $8x = 120$
b. ○ $x + 8 = 12$
c. ○ $8 - x = 120$
d. ○ $8x = 12$

Question 42

Select the true statement. a. $6 > 9$

b. $6 < 9$

Question 43

The symbol $<$ means:

a. ○ is less than
b. ○ is more than

Question 44

Which of these number sentences is true?

a. ○ $5 < 20$
b. ○ $5 > 20$

Question 45

True or false?

You can use a letter and an inequality to represent an open interval. a. True b. False

Question 46

$p < 8$ means that p is:

a. greater than 8 b. less than 8

Question 47

$y < 12$ means that y is:

a. greater than 12 b. less than 12

Question 48

$h > 20$ means that h is:

a. greater than 20 b. less than 20

Question 49

$k > 11$ means that k is:

a. greater than 11 b. less than 11

Question 50

Start with a number, multiply by three and then add five.

Which algebraic expression fits this sentence?

a. $3y + 5$ b. $5y + 3$ c. $3(y + 5)$

Question 51

Write $6 \times m \times 5$ without using $\times$ signs. $\square m$

Question 52

Jasmine says that $3\ a$ could mean three apples in algebra. Is she correct?

a. No, because a stands for a number not an object. b. Yes, because a could stand for an apple.

Question 53

Write $n \times 1$ in simplest form without using a $\times$ sign. $\square$

Question 54

Write $q \times 7 - p \times 6$ without $\times$ signs. $7\square - \square p$

Question 55

$3\ q\ -\ p + 10\ -9\ t$

How many terms are there in this expression?

$\square$

Question 56

Rakesh wrote the following working:

$m \div n = \frac{m}{n}$

He was finding:

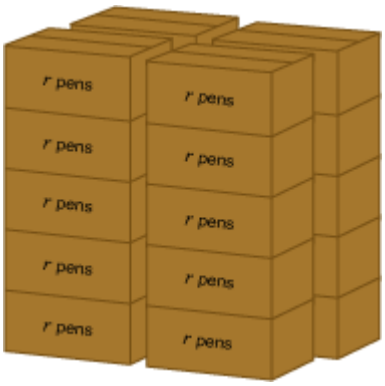
a. a quotient b. a product c. a sum d. a difference

Question 57

Boxes of pens are stacked in the storeroom.

Each box contains r pens.

How many pens are there altogether?



☐ r

Question 58

m multiplied by n is: a. $m + n$ b. $m\,n$ c. $m \div n$ d. $m - n$

Question 59

Write an algebraic expression for a multiplied by s . ☐

Question 60

If $a = 7$, then: $5\ a =$ ☐

Question 61

Evaluate $p + q$ when $p = 3$ and $q = 5$. $p + q$ = ☐ + 5

= ☐

Question 62

If $p = 6$ what is the value of $\frac{2p}{3} ? \frac{2p}{3}$ = ☐

Question 63

For $r = 5$ and $m = 8$, work out the value of $2\ m + r$. $2\ m + r = 2 \times 8 +$ ☐

$=$ ☐

Question 64

If $m = 6$, find the value of $\frac{m}{2} \cdot \frac{m}{2} =$ ☐

Question 65

If $m = 6$, then:

$\frac{m + 8}{2} =$ ☐

Question 66

Evaluate $2\ m + 3$ when $m = 4$.

$2\ m + 3 =$ ☐

Question 67

$b + d = 24$. Which of the following values could b and d have? Select ***all*** correct answers.

a. ☐ $b = 4$ and $d = 8$

b. ☐ $b = 8$ and $d = 4$

c. ☐ $b = 0$ and $d = 24$

d. ☐ $b = 6$ and $d = 18$

Question 68

$7\ a + 3\ a =$ ☐

Question 69

$a + a + a + a + a =$ ☐

Question 70

Which expressions below have two terms? a. ☐$x + y + 5$ b. ☐$2 - 3\ m$ c. ☐$p \times y$ d. ☐$5kp - mn$

Question 71

$5\ b + 3\ a - 3\ b =$ ☐ $a +$ ☐ b

Question 72

Select all the sets of like terms.

a. ☐ $3\ a$, $11\ a$, $-\ a$

b. ☐ $k \times z$, k , z

c. ☐ $15\ ac$, $15\ mn$, 15

d. ☐ ab , $7\ aa$, 7ab

Question 73

$15\ mn + 2\ mn - 5\ mn =$ ☐

Question 74

Select all the terms that are like terms to $7\ ab$. a. ☐$3\ ab$ b. ☐$6\ b$ c. ☐$7\ a$ d. ☐$-\ ba$

Question 75

True or false?

$3\ k = k + k + k$

a. True b. False

Question 76

$9(5 - 8i) = \square - \square i$

Question 77

$4(a + 5) = \square a + \square$

Question 78

$2(3v - 5) = \square v - \square$

Question 79

$9(a + 2) = 9\square + \square$

Question 80

This cup contains k counters.

Five groups of $k + 2 = \square k + \square$

Question 81

$7(2m - 3) = \square m - \square$

Question 82

$10(5 + 2p) = \square + \square p$

Question 83

$7(3b + 11c) = \square b + \square c$

Question 84

Solve this equation.

$5\ y = 35$

$y =$ ☐

Question 85

Seven more than a number is fifteen.

Which of these equations represents this problem?

a. ○ $7\ x = 15$

b. ○ $x\ + 7 = 15$

c. ○ $x\ - 7 = 15$

d. ○ $x\ \div 7 = 15$

Question 86

Six less than a number is two.

What is the number?

number = ☐

Question 87

$x - 5 = 12$

Which statement describes this equation?

a. ○ Five more than a number is twelve.

b. ○ Twelve less than a number is five.

c. ○ Five less than a number is twelve.

d. ○ Five times twelve less than a number is five.

Question 88

Six times a number is twenty-seven.

What is the number?

number = ☐

Question 89

Twice a number is equal to 10. Choose the correct equation for solving this problem.

a. $10\,k = 2$ b. $k + 2 = 10$ c. $2\,k = 10$

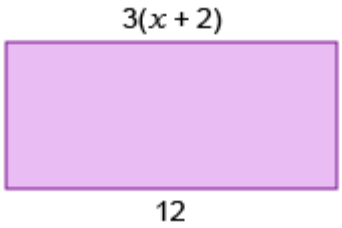
Question 90

Solve this equation.

$x - 3 = 29$

$x =$ ☐

Question 91



Select all equations that represent this diagram.

a. ☐ $3x + 5 = 12$

b. ☐ $3x + 6 = 12$

c. ☐ $3(x + 2) = 12$

d. ☐ $3x + 2 = 12$

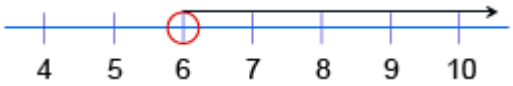
Question 92

$-4 < h < 14$

Select all the numbers that could be possible values of h. a. ☐14 b. ☐7 c. ☐−3 d. ☐−20 e. ☐1000

Question 93

The solution to an inequality is graphed as:

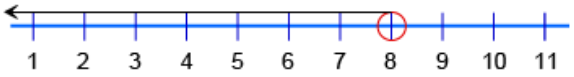


This tells you that the inequality is solved by any number greater than:

Question 94

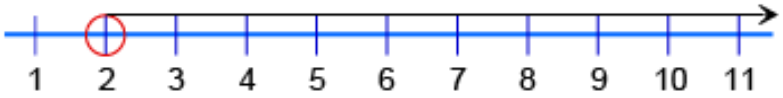
The solution to $p < 8$ shown on a number line is:

a.


b.


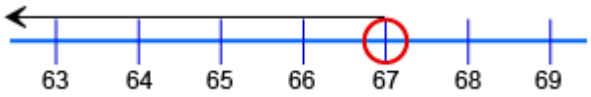
Question 95

The solution to $p > 2$ shown on a number line is:

a.


b.

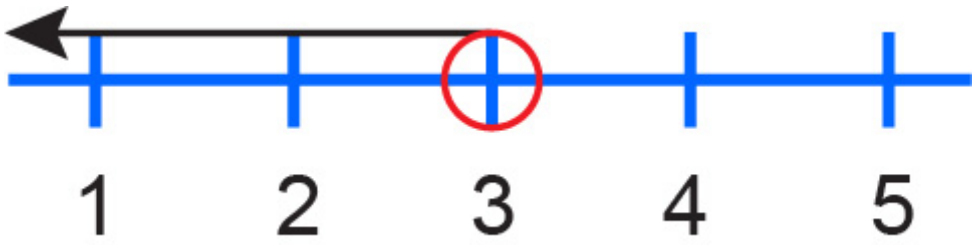

Question 96



Using the letter, v , this number line shows values:

a. $v > 67$ b. $v < 67$

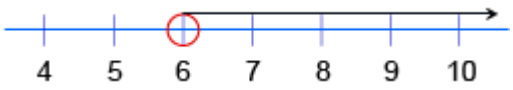
Question 97



Which inequality matches this number line?

a. $a < 3$ b. $a > 3$

Question 98



This number line shows the inequality:

a. $b < 6$

b. $b > 6$

Question 99

□ > 58

□ < 60

What number does □ stand for?

□