

DAWSAN'S MATHS EXPRESS

D. Williams

Intro Tasks

NAME



DAWSAN'S
Maths
EXPRESS

S. Edwards & D. Williams

These fun calculations are devised
to be to be used in conjunction with the
Dawsan's Maths Dictionary.

WHERE'S THIS REFERENCE?

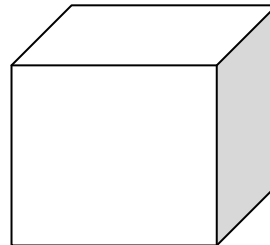
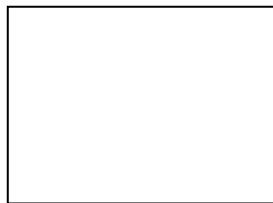
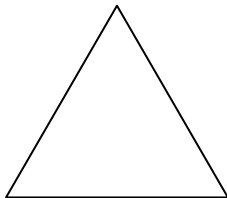
Refer to the following references in your Dawsan's Dictionary and answer the questions that follow:

1. Tables: $12 \times \dots = 96$ $54 \div \dots = 6$
2. Tables: $\dots \times 12 = 144$ $39 \div \dots = 3$
3. Tables: $8 \times 16 = \dots$ $180 \div 15 = \dots$
4. Tables: $6 \times 18 = \dots$ $171 \div 19 = \dots$
5. Tables: $10 \times \dots = 200$ $180 \div \dots = 9$
6. Metric Conversions: $10\text{mm} = \dots\text{cm}$ $1\ 000\text{m} = \dots\text{km}$
7. Time: $60\text{sec} = \dots\text{min}$ $60\text{min} = \dots\text{hour}$
8. Vertical: Which of these is vertical: a wall or a road? (Circle the right answer)
9. Time: \dots seconds = 1 minute..... months = 1 year
10. Time: How many months have (a) 30 days and (b) 31 days
11. Symbols: Draw the symbol that means (a) not equal to and (b) Angle
12. Special Words: How many in (a) a score and (b) a great gross
13. Roman Numerals: Write the Roman numeral for (a) 5 and (b) 10
14. Percentages: $\frac{1}{2} = \dots \%$ $\frac{1}{8} = \dots \%$
15. Prefixes: Which of these prefixes stands for the number 1? (a) bi (b) tri (c) uni
16. Percentages: The word "percent" means (a) per 10 (b) per 1 000 (c) per 100
17. Inverse Operations: Which is the inverse operation of $2 + 4 = 6$
(a) $6 - 4 = 2$ (b) $4 + 2 = 6$ (c) $2 \times 4 = 8$
18. Digital Time: Which is an example of digital time? (a) half past two (b) five past six (c) 10:25
19. Recurring Decimals: The recurring decimal 0,3333 can be written as (a) 0,3,3,3 (b) $0,\overline{3}$ (c) 0,3.
20. Zero: Any number multiplied by zero is always (a) the same number (b) one (c) zero

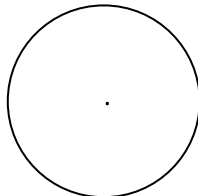
LET'S LOOK IT UP!

Look up the following words (written boldly) in your Dawson's Dictionary. Once you have found the word, circle the correct answer. If you know the alphabet you will be able to work quickly.

1. **ODD NUMBER:** Which of the following is an odd number? (a) 8 (b) 6 (c) 3
2. **NATURAL NUMBER:** Which of these is NOT a natural number? (a) 0 (b) 1 (c) 6
3. **COMPOSITE NUMBER:** Which of these is a composite number? (a) 1 (b) 11 (c) 12
4. **CONSECUTIVE NUMBERS:** Which sequence is consecutive? (a) 4,5,6... (b) 2,4,6.. (c) 3,5,7...
5. **PALINDROMIC NUMBER:** Which of these is a palindromic number (a) 122 (b) 17 (c) 121
6. **AREA OF A RECTANGLE:** What is the area of a rectangle with a length of 3cm and a breadth of 4cm?
(a) 7cm^2 (b) 12cm^2 (c) 14cm^2
7. **SQUARE ROOT:** How do you write the square root of 64? (a) 64^2 (b) $\sqrt{64}$ (c) 8×8
8. **QUADRILATERAL:** The four angles of a quadrilateral add up to (a) 180° (b) 90° (c) 360°
9. **POLYHEDRON:** Which of these is a polyhedron?



10. **CIRCLE:** On the circle provided show the (a) radius (b) diameter and (c) circumference.



GETTING TO KNOW YOUR DICTIONARY

In each of the following questions there are words printed boldly. These are the words that you must look up in your dictionary, which is of course in alphabetical order. Once you have found the word/s answer the question related to that word.

1. Write down the names of 3 **POLYGONS**. _____

2. How many in a **BAKER'S DOZEN**? _____

3. What is an **ELLIPSE**?

4. Write down the names of three **ANGLES**. _____

5. How far is a standard **MARATHON** race? _____

6. Name 3 types of **TRIANGLES**.

7. How many in a **GROSS**? _____

8. What does the **SYMBOL** \therefore mean? _____

9. What is a **PALINDROMIC** number?

10. Find the value of **ROMAN NUMERAL** XCVII. _____

11. What is the **RECIPROCAL** of $\frac{2}{3}$? _____

12. In **TIME** how many years are there in a millennium? _____

13. The **SPECIAL WORD**, a great gross, has a value of ? _____

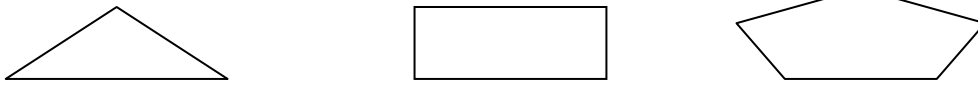
14. How many faces are there on a **CUBE**? _____

15. What is the meaning of the word **CIRCUMFERENCE**? _____

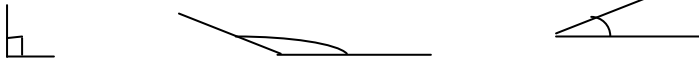
RE-SEARCHING!

Using your Dawsan's Dictionary look up the words that are **boldly printed**. Then answer the question related to that word, by drawing a circle around your choice.

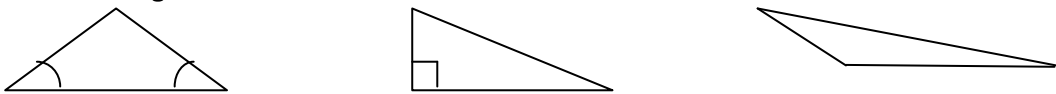
1. Which of these **polygons** is a pentagon?



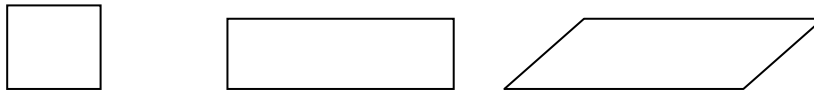
2. Which of these **angles** is acute?



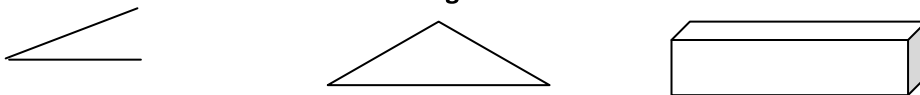
3. Which of these **triangles** is isosceles?



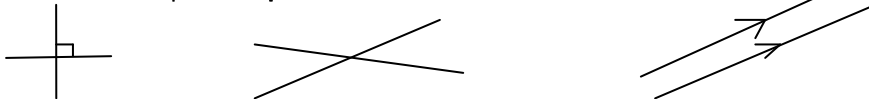
4. Which of these **quadrilaterals** is a parallelogram?



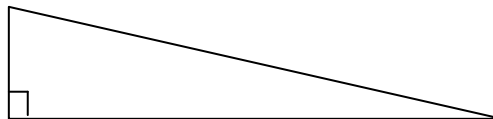
5. Which of these is a **three-dimensional figure**?



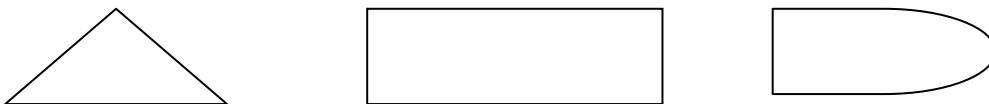
6. Which of these represent **parallel lines**?



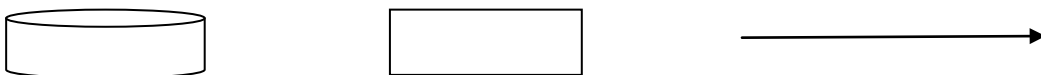
7. On this triangle show the **hypotenuse** and the **base**.



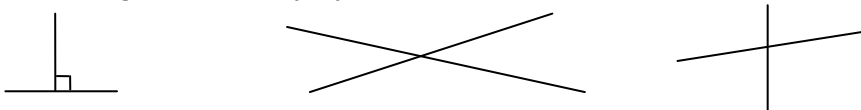
8. Draw **lines of symmetry** on the following figures.



9. Which of these is a **two-dimensional figure**?



10. Which of these figures shows a **perpendicular** line?



CIRCLING NUMBERS

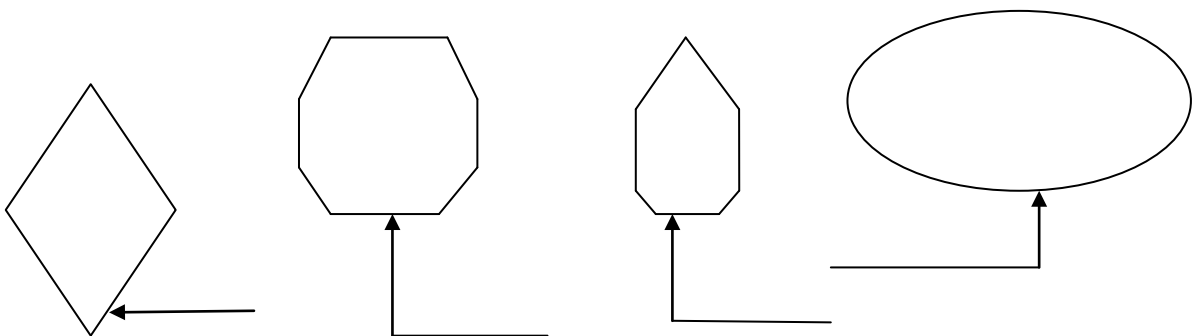
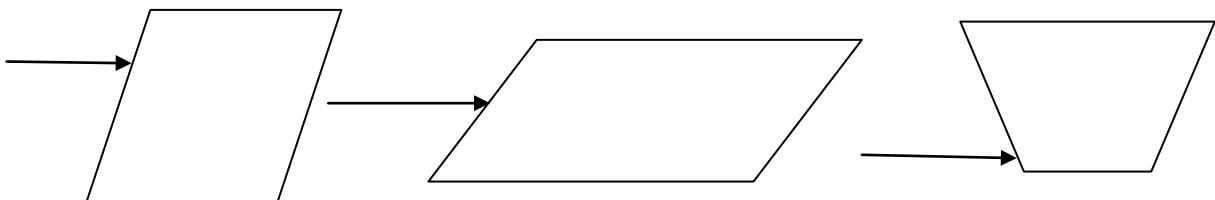
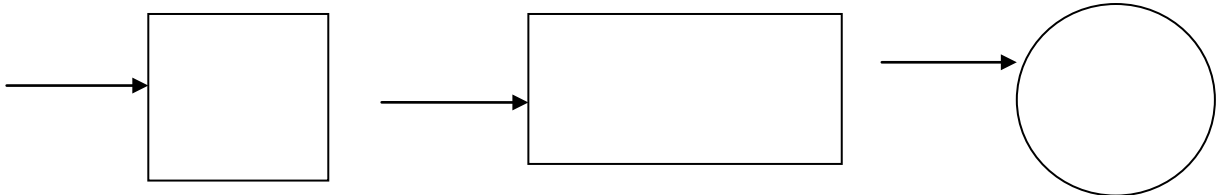
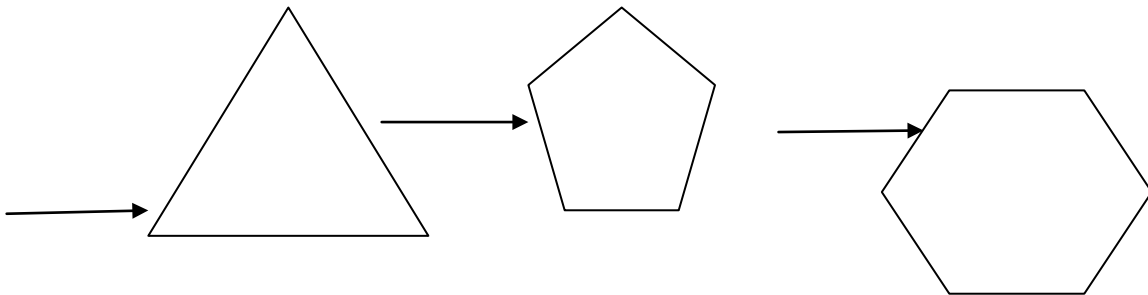
Referring to your Dawsan's Dictionary, look up the words printed boldly and then circle the answer of your choice.

- Which of these numbers is called the **product**? $3 \times 2 = 6$
- Which of these numbers is called the **sum**? $5 + 7 = 12$
- Which of these numbers is called the **difference**? $14 - 4 = 10$
- Which of these numbers is called the **quotient**? $12 \div 3 = 4$
- Which of these numbers is called the **dividend**? $15 \div 5 = 3$
- What is the freezing point of water on a **Celsius** temperature scale? 5° 10° 0°
- A **hexagon** is a polygon with how many sides? 6 5 7
- Which of the following sums gives an answer that is a **square number**?
 $2 + 6 = 8$ $9 \div 3 = 3$ $5 \times 5 = 25$
- An **ellipse** looks like a/an ... square oval triangle
- In this fraction, circle the **denominator**: $3\frac{1}{4}$
- Which of the following **symbols** means greater than? $<$ $>$ \equiv
- Which of these numbers has an **exponent** (circle the exponent)? 4_2 $\sqrt{16}$ 6^2
- In an equilateral **triangle** each angle measures ... 60° 180° 45°
- A **three-dimensional figure** has ... length; length and breadth; length, breadth and height
- What is the value of **Pi (π)**? 3,15 2,27 $\frac{22}{7}$
- In the **order of operations** which sum would you do first in this example? $5 + 2 \times 4 - 1$
 $5 + 2$ 2×4 $4 - 1$
- The faces on a **pyramid** are ... squares triangles circles
- How many degrees in a **revolution**? 180° 360° 90°
- How many in a **score**? 20 60 100
- A **trapezoid** is an example of a ... quadrilateral polygon triangle

SHAPING-UP

From the selection of answers given, identify each of the following shapes.
Refer to QUADRILATERALS and POLYGONS.

SQUARE	CIRCLE	RECTANGLE	HEPTAGON	PARALLELOGRAM
TRAPEZIUM	RHOMBUS	OCTAGON	TRIANGLE	ELLIPSE
PENTAGON	KITE	HEXAGON		



DICTIONARY/WORD SEARCH

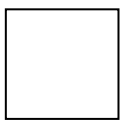
Refer to your Dawsan's Dictionary to find the answers to questions 1 to 20. Then find the words on the grid below. The words may read from left to right, right to left, upwards, downwards or diagonally across.

I	N	U	N	I	N	E	T	O	W	T
T	H	G	I	E	S	Z	E	R	O	H
N	O	R	N	E	V	I	F	O	U	R
A	U	O	E	D	I	E	X	I	P	E
E	R	S	T	R	I	O	S	O	N	E
M	U	S	Y	T	N	E	W	T	E	N
R	U	O	F	Y	T	N	E	V	E	S

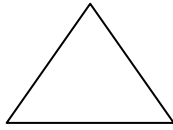
1. The 1st **natural number** is _____ and the 1st **prime number** is _____ .
2. A **quadrilateral** has _____ sides and a **triangle** has _____ sides.
3. How many years in a **decade** _____ and how many in one **score**? _____ .
4. The **square root** of 64 ($\sqrt{64}$) is _____ and three **squared** (3^2) is _____ .
5. How many sides on the **polygons** called a heptagon _____ and on a hexagon _____ .
6. The **special word** for 144 is _____ and for a group of 3 people is _____ .
7. The **Roman numeral** V stands for _____ and LXXIV stands for _____ .
8. When adding numbers together the special name given to the answer is the (**starts with s**) _____ .
9. In **time** there are 3 600 seconds in one _____ .
10. Find another word which has the same meaning as the word **average**. _____ .
11. When any number is multiplied by **zero** the answer is always _____ .
12. The following symbol (π) has a special name. What is it? (**starts with p**). _____ .
13. The sum of two **complementary angles** is _____ .
14. There are 1 000 years in a **millennium**. Is this statement TRUE or FALSE?
15. The **prefix** for one is _____ and the prefix for two is bi or _____ .

WHICH IS NOT A?

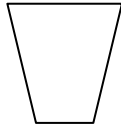
1. Which of the following is not a **quadrilateral**?



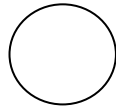
Square



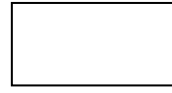
Triangle



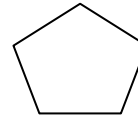
Trapezium



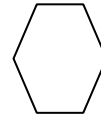
Circle



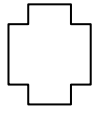
Rectangle



Pentagon



Hexagon



Dodecagon

2. Which of these is not a type of **angle**?

Reflex; Acute; Isosceles; Equilateral; Obtuse; Straight; Scalene; Right

3. Which of these is not a **recurring decimal**?

$\frac{1}{2}$; $\frac{1}{3}$; $\frac{3}{5}$; $\frac{1}{6}$; $\frac{2}{11}$; $\frac{4}{9}$; $\frac{7}{8}$; $\frac{7}{12}$; $\frac{9}{10}$; $\frac{7}{9}$

4. Which of these is not a **symbol** used in Maths?

\angle ; \odot ; $<$; \approx ; \therefore ; \forall ; Ω ; \neq ; $>$; ζ ; \sim ; $^\circ$

5. Which of these is not a **palindromic** number?

121; 3 223; 42 424; 11 311; 234 423; 611; 89 989; 123 321

6. Which of these is not a **prime number**?

6; 13; 53; 83; 79; 84; 4; 5; 383; 277; 86; 101; 29

If you are correct, the digits you have chosen will form a palindromic number!

7. Write these numbers in **Roman numerals**.

1; 10; 50; 500; 550; 11

If you are correct, the symbols you have recorded will be palindromic!

8. Which of these is not a **square number**?

9; 7; 64; 65; 16; 5; 196; 441; 1 849; 67; 2 704; 1 296

If you are correct, the numbers you have chosen will form a palindromic number!

9. Which of these numbers is not **divisible** by 17?

3; 102; 187; 34; 77; 37; 204; 170; 73; 68; 51; 85

If you are correct, the numbers you have chosen will form a palindromic number!

10. Now form a palindromic number with these numbers:

5th **counting** no.; 1st **prime** no.; 3rd **natural** no.; 2nd **composite** no.; 9th **multiple** of 7;
2 **dozen**.

CATEGORICAL SHAPES

Your task here is to put the shapes into groups by colouring in the squares/shapes with the colours given.

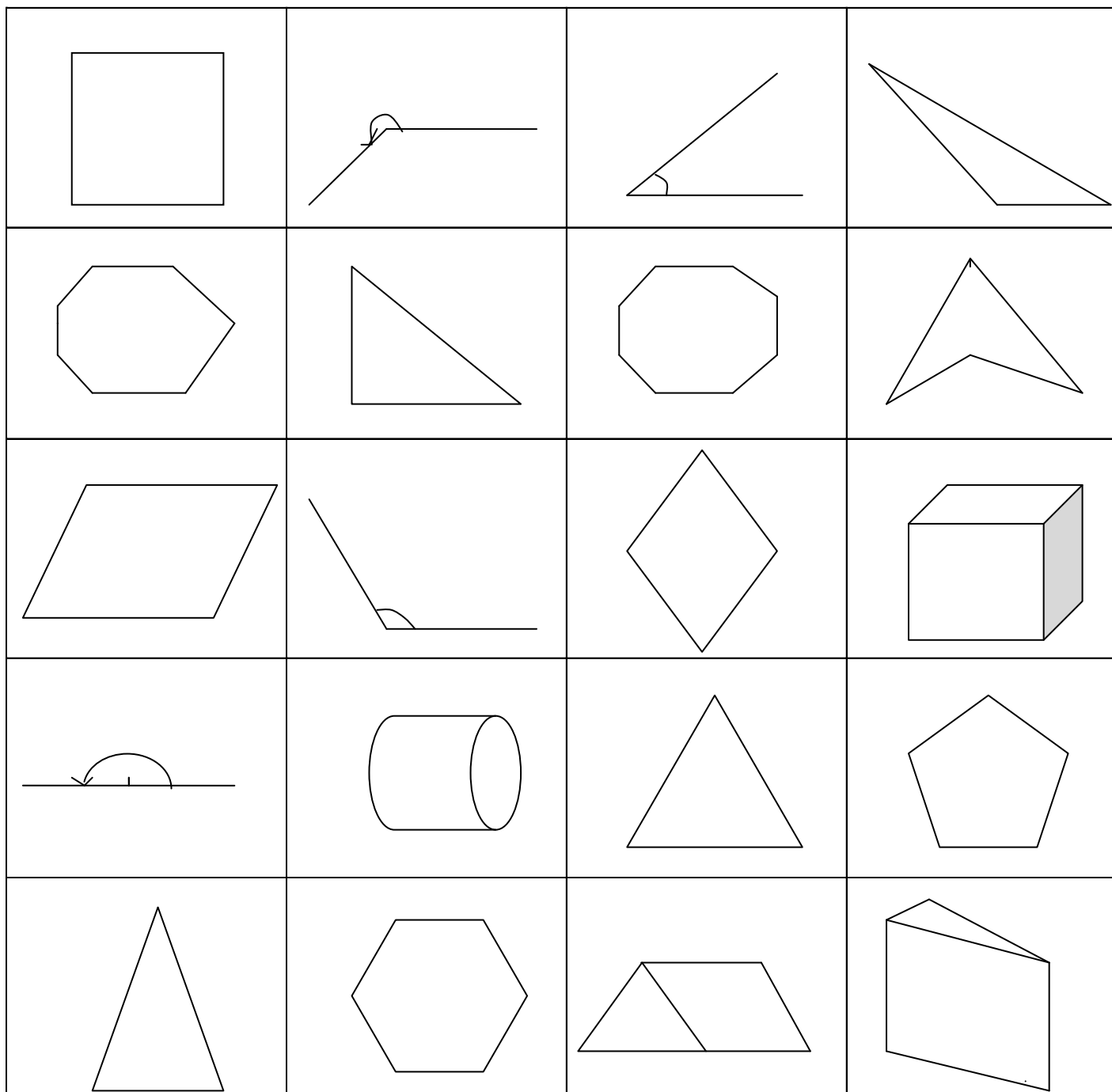
1. Colour the four **blocks** with **angles** RED.

3. Colour the four **quadrilaterals** BLUE.

5. Colour the four **polyhedrons** ORANGE.

2. Colour the four **triangles** GREEN.

4. Colour the four **polygons** YELLOW.



IN THE LANGUAGE OF MATHS

Using numbers and symbols rewrite each of the following as mathematical sentences.

For example: Twenty divided by four is not equal to six. $20 \div 4 \neq 6$ (SYMBOLS)

1. One hundred and two is greater than five. _____

2. Nine hundred and ninety nine is approximately equal to one hundred. _____

3. A right angle is equal to ninety degrees. _____

4. Line AB is parallel to line CD. _____

5. The line between E and F. _____

6. Triangle PQR is congruent to triangle STU. _____

7. d equals e, therefore e equals d. _____

8. Triangle GHI is similar to triangle JKL. _____

9. The line CD is perpendicular to line ET. _____

10. Pi is equal to twenty two over seven. _____

11. Angle A, plus angle B, plus angle C equals one hundred and eighty degrees. _____

12. Line CD is a line that starts at C through D and continues on. _____

13. One third is equal to zero comma three recurring. _____

14. Line EF is a line that includes E and F and continues in both directions. _____

15. Angle D is smaller than angle C. _____

16. The square root of sixty four is eight. _____

17. Two to the power of three is equal to eight. _____

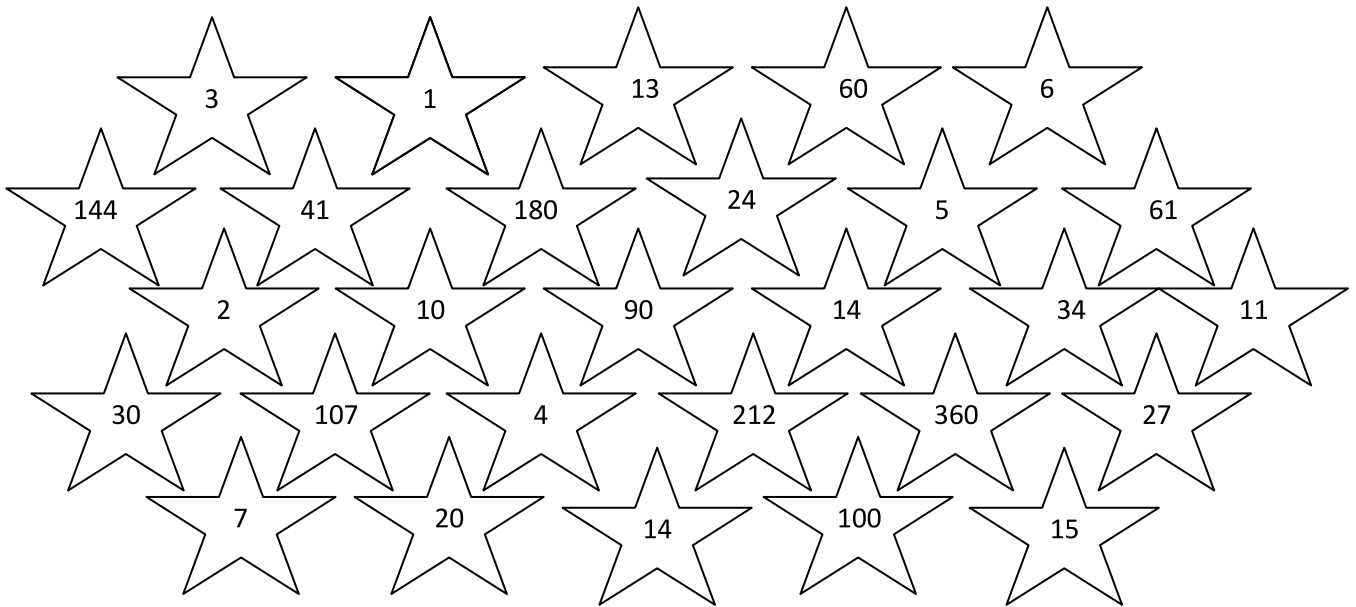
18. Thirty one comma one four is not equal to thirty one and a quarter. _____

19. One million in Roman numerals. _____

20. Twenty five percent of three hundred and sixty degrees equals a right angle. _____

IT'S IN THE STARS

All the answers to the following are to be found in the stars. Once you have found the answer colour in the star with a yellow crayon or koki. Colour the left over stars orange.



1. The **SPECIAL NUMBER** in a brace.
2. The total no. of degrees in a **TRIANGLE**.
3. The number in a **BAKER'S DOZEN**.
4. The no. of days in a fortnight. **(TIME)**
5. The number of months with 31 days. **(TIME)**
6. The value of **ROMAN NUMERAL** XLI
7. The value of three to the **POWER** of three.
8. The value of twelve **SQUARED**.
9. The **PLACE VALUE** of the nine in 1 392.
10. The 28th **PRIME NUMBER** (page 90).
11. The total no. of degrees in a **QUADRILATERAL**.
12. The no. of edges on a **DODECAHEDRON**
13. The **SQUARE ROOT** of 121.
14. The number of years in a **DECADE**.
15. The number in five **DOZEN**.
16. The no. in the **SPECIAL WORD** score.
17. Boiling pt. (in degrees) on the **FAHRENHEIT** scale.
18. The value of the **PREFIX** quindecia.
19. The approximate no. of months in a season. **(TIME)**
20. The number of quarts in a **gallon** (page 87).
21. Next number in the **FIBONACCI** sequence: 1;2;3;5;8;13;21; ...
22. Boiling point (in degrees) on the **CELCIUS** scale.
23. The number of singers in a quintet. **(SPECIAL WORD)**

FUN FOLLOW-ON

In this exercise you must work carefully and accurately as the answer to each subsequent question is dependent on your previous answer. So, if you get the first one wrong, you'll get them ALL wrong!

The words printed boldly are Dictionary references.

1. How many words in the following sequence are spelled incorrectly?

subtrahend; supplementary; reciprocle; parallelogram; polyhedron; integer

.....

2. Ready for number 2? Multiply your answer by the total number of sides on the following

polygons: a triangle, a nonagon, a heptagon and a decagon.

.....

3. Find the sum of number 2's answer, a score, a brace and a baker's dozen.

(Special words for numbers)

.....

4. Decrease your answer by the number of faces on 2 **dodecahedrons**.

.....

5. Multiply your previous by the 31st **prime number** (page 90).

.....

6. P O S T is to S T O P as number 5's answer is to?

.....

7. Divide your answer by the 7th **counting number**.

.....

8. Decrease your answer by **Roman numeral LXIII**.

.....

9. Divide your answer by 50 **decades**.

.....

10. I hope this hasn't been too difficult for you! Now double your answer and subtract it from the 12th multiple of 18. (page 104)

.....

My answer is palindromic. Is yours?

FUN SEARCHING

Using the Dawson's Dictionary find the answers to the following questions. The words typed boldly are your dictionary references.

1. What is a **PREFIX** for the number 20? _____

2. Which of the following is not a mathematical **SYMBOL**? (Draw the symbol)

< ∴ Δ ≠ ≈ ♥

3. Look at this **FRACTION**: $\frac{3}{4}$

What name is given to the number below the line? _____

4. What is the name given to an **ANGLE TYPE** that is smaller than 90°? _____

5. In **TIME** 168 hours is equal to one? _____

6. Equilateral **TRIANGLES** have 3 angles each measuring degrees. _____

7. The word **MEAN** is another name for the of a group of numbers. _____

8. How many sides on a **POLYGON** called a nonagon? _____

9. Find the answer to this sum which is written in **ROMAN NUMERALS**. _____

$$XLII - XXXV = \dots\dots$$

Now take the first letter of each of your answers, and it reads....?

— — — — — — — — — — !

EUREKA!

(Which means: "I have found it!")

Using your dictionary find the answers to the following questions. Write each answer in WORDS. In order to help you, the word that you need to look up, is printed in bold.

1. The name of a **polygon** with 10 sides is called a ... _____
2. The name given to an **angle** smaller ($<$) than 90° is an ... angle. _____
3. In **time** the name given to 168 hours is one ... _____
4. In a subtraction sum you get the **minuend**, ... and the difference. _____
5. An **addend** is found in an ... sum. _____
6. The name given to the number written on the top of a **fraction** is the ... _____
7. The number of sides on a **polygon** called a heptagon is ... _____
8. The name given to a **polygon** with six sides is a ... _____
9. The word **mean** means the ... of a group of numbers. _____
10. The value of the **Roman numeral** LXX is ... _____
11. Name of a **quadrilateral** with 2 parallel sides and no equal angles is a _____
12. The **prefix** semi stands for a ... _____
13. 31 is the ... **prime number**. (page 90) _____
14. The **symbol** \approx means ... _____
15. In **percentages**, 50% can also be written as a ... _____
16. A **special word** for the number 20 is a ... _____
17. In the **appendix (page 88)**, milligram, gram and kilogram measure _____
18. The name given to a **triangle** with all three angles equal to 60° is an _____
19. The name given to an **angle** greater than 180° is a ... angle. _____
20. In **time** find the number of months with 31 days. _____




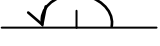
Now, in order to find out if you scored 100% or not, take the first letter of each of your answers and write them in order on the spaces below. If you're baffled, the clue is in the apple!





_____!

KNOCK-OUT

Cross off all the words as instructed below.

ICOS	ACUTE	SCORE	DL	DEGREE	SQUARE	TRAPEZIUM
TRIANGLE	PARALLEL	YOU	PENTAGON	ARE	QUINT	CHORD
XLII	DIAMETER	HEPTA	A	REFLEX	XXVIII	BRACE
DOZEN	LXXV	STRAIGHT	GROSS	RADIUS	SIMILAR	OCTO
RECTANGLE	HEXAGON	RHOMBUS	ANGLE	KITE	OBTUSE	WINNER

1. Find the names of these four **ANGLE TYPES**: a)  b)  c)  d) 





2. Find the names of these **POLYGONS**: a)  b)  c)  d) 

3. Find **PREFIXES** for the following numbers: a) 20 b) 5 c) 8 d) 7

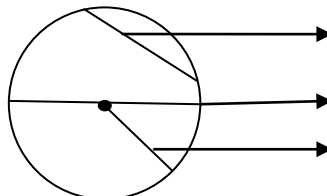
4. What **SPECIAL NAME** is given to the following numbers? a) 12 b) 144 c) 20 d) 2

5. What name is given to the following mathematical **SYMBOLS**? a) ° b) ∠ c) ~ d) ||

6. Find the following the following numbers in **ROMAN NUMERALS**: a) 42 b) 75 c) 28 d) 550

7. Find the names of the following **QUADRILATERALS**: a)  b)  c)  d) 

8. Name the following parts of a **CIRCLE**:



Write down the words remaining: _____

CROSSWORD/NUMBER

This works the same way as a crossword puzzle, except you are filling in numbers instead of words. Fill in the answers to the questions on the grid provided. The last ten clues are tricky, as they depend on the accuracy of your answers. You will not be able to work consecutively. Work on the clues you have already solved.

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.	

Clues ACROSS:

1. A dozen + 1st prime number.
3. $(2 \times 100) + (8 \times 10) + (9 \times 1)$
5. 7^2
7. 383×19
8. R4 000 – R672
9. Order of operations: $190 + 36 \times 10$
11. $686 \div 3^{\text{rd}}$ counting number
13. Value of Roman numeral CCCLXXXIII
15. $7744 \div 0,25$
16. Number of days in 51 fortnights
18. Three gross – a brace
20. Dividend of 3 and 87
22. 5-Across multiplied by 27-Down
23. 3-Down plus 7-Across
25. Two less than 22-Down
26. 22-Down multiplied by 24-Down
27. Last two digits of 26-Across

Clues DOWN:

1. 7th prime number.
2. 476×9
3. 0,275kg = grams
4. 9 centuries + 3 decades
5. Number of eggs in 354 dozen.
6. Supplementary \angle of 82°
10. $(5 \times 10^4) + (9 \times 10^3) + (9 \times 10^2) + (7 \times 10^1) + (6 \times 10^0)$
11. $CXIX \times III$
12. Degrees in a revolution – 26°
13. Number of minutes from 6:00 to 12:04
14. Product of 5 and 62
17. Millennium + 2 decades + 9 years
19. 8-Across plus 24-Down
20. 11-Across minus 6-Down
21. The second digit is the sum of the other two.
22. Five less than 24-Down
24. First two digits of 20-Across

Check it out

Write the correct number sentence for each of the following problems. Then work out the sum to see if it is correct:

The first one has been done for you.

1. The third **multiple** of four divided by the first **prime number** equals half a **dozen**.

$$12 \div 2 = 6 \quad \checkmark$$

2. A **baker's dozen** added to the **fourth prime number** equals two **decades**.

3. A **millennium** divided by two and a half **score** equals a score.

4. The number of degrees in a **triangle** minus the number of degrees in half a **revolution** equals the first **counting number**. _____

5. **Roman numeral** XCV minus Roman numeral LXX equals Roman numeral XXV.

6. The sum of the **factors** of 24 is equal to the **Highest Common Factor** of 15 and 12.

7. If the first **natural number** is the **multiplier** and the **multiplicand** is 34, the **product** is equal to the multiplicand. _____

8. Five and a half **decades** is equal to the sum of three **baker's dozen** plus 4 **squared**.

9. A **great gross** minus a **millennium** minus five **centuries** is equal to **Roman numeral** CCXXVIII.

10. The number of days in April plus the number of days in a leap year is equal to the 11th multiple of 12 multiplied by the fourth counting number.



DAWSAN'S
Maths
EXPRESS

S. Edwards & D. Williams

Answers

WHERE'S THIS REFERENCE?

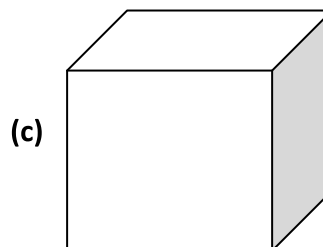
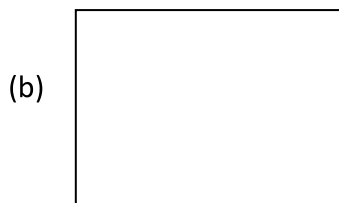
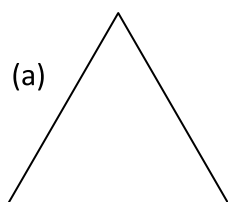
Refer to the following references in your Dawson's Dictionary and answer the questions that follow:

1. Tables: $12 \times 8 = 96$ $54 \div 9 = 6$
2. Tables: $12 \times 12 = 144$ $39 \div 13 = 3$
3. Tables: $8 \times 16 = 128$ $180 \div 15 = 12$
4. Tables: $6 \times 18 = 128$ $171 \div 19 = 9$
5. Tables: $10 \times 20 = 200$ $180 \div 20 = 9$
6. Metric conversions: $10\text{mm} = 1 \text{ cm}$ $1\,000\text{m} = 1 \text{ km}$
7. Time: $60\text{sec} = 1 \text{ min}$ $60\text{min} = 1 \text{ hour}$
8. Vertical: Which of these is vertical: a wall or a road? (Circle the right answer)
9. Time: $3\,600 \text{ second} = 1 \text{ hour}$ $12 \text{ months} = 1 \text{ year}$
10. Time: How many months have (a) 30 days **4** and (b) 31 days **7**
11. Symbols: Draw the symbol that means (a) not equal to \neq and (b) Angle \angle
12. Special Words: How many in (a) a score **20** and (b) a great gross **1 728**
13. Roman Numerals: Write the Roman numeral for (a) 5 **V** and (b) 10 **X**
14. Percentages: $\frac{1}{2} = 50 \%$ $\frac{1}{8} = 12,5 \%$
15. Prefixes: Which of these prefixes stands for the number 1? (a) bi (b) tri (c) **uni**
16. Percentages: The word "percent" means (a) per 10 (b) per 1 000 (c) **per 100**
17. Inverse Operations: Which is the inverse operation of $2 + 4 = 6$
(a) **$6 - 4 = 2$** (b) $4 + 2 = 6$ (c) $2 \times 4 = 8$
18. Digital Time: Which is an example of digital time? (a) half past two (b) five past six (c) **10:25**
19. Decimals: The recurring decimal 0,3333 can be written as (a) 0,3,3,3 (b) **$0,\bar{3}$** (c) 0,3.
20. Zero: Any number multiplied by zero is always (a) the same number (b) one (c) **zero**

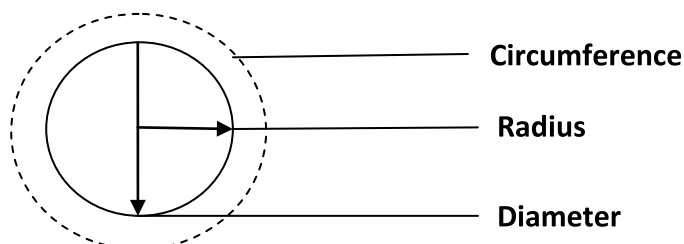
LET'S LOOK IT UP!

Look up the following words (written **boldly** and underlined>) in your Dawsan's Dictionary. Once you have found the word, circle the correct answer. If you know the alphabet you will be able to work quickly.

1. **ODD NUMBER**: Which of the following is an odd number? (a) 8 (b) 6 (c) **3**
2. **NATURAL NUMBER**: Which of these is NOT a natural number? (a) **0** (b) 1 (c) 6
3. **COMPOSITE NUMBER**: Which of these is a composite number? (a) 1 (b) 11 (c) **12**
4. **CONSECUTIVE NUMBERS**: Which sequence is consecutive? (a) **4,5,6...** (b) 2,4,6.. (c) 3,5,7...
5. **PALINDROMIC NUMBER**: Which of these is a palindromic number (a) 122 (b) 17 (c) **121**
6. **AREA OF A RECTANGLE**: What is the area of a rectangle with a length of 3cm and a breadth of 4cm?
(a) 7cm^2 (b) **12cm^2** (c) 14cm^2
7. **SQUARE ROOT**: How do you write the square root of 64? (a) 64^2 (b) $\sqrt{64}$ (c) 8×8
8. **QUADRILATERAL**: The four angles of a quadrilateral add up to (a) 180° (b) 90° (c) **360°**
9. **POLYHEDRON**: Which of these is a polyhedron?



10. **CIRCLE**: On the circle provided show the (a) radius (b) diameter and (c) circumference.



GETTING TO KNOW YOUR DICTIONARY

In each of the following questions there are words printed boldly and under-lined. These are the words that you must look up in your dictionary, which is of course in alphabetical order. Once you have found the word/s answer the question related to that word.

1. Write down the names of 3 POLYGONS.

Octagon; Pentagon; Hexagon; Heptagon; Triangle; Square; Rectangle .. (Any 3)

2. How many in a BAKER'S DOZEN? **13**

3. What is an ELLIPSE?

An ellipse looks like a circle that has been squashed into an oval.

4. Write down the names of three ANGLES.

Acute; obtuse; reflex; straight angle; right angle ... (Any 3)

5. How far is a standard MARATHON race? **42,2km**

6. Name 3 types of TRIANGLES.

Right \angle 'd; scalene; isosceles; obtuse \angle 'd; acute \angle 'd; equilateral (Any 3)

7. How many in a GROSS? **144**

8. What does the SYMBOL \therefore mean? **Therefore**

9. What is a PALINDROMIC number?

A number that reads the same from left to right and right to left e.g. 1221

10. Find the value of ROMAN NUMERAL XCVII. **97**

11. What is the RECIPROCAL of $\frac{2}{3}$? **$\frac{3}{2}$**

12. In TIME how many years are there in a millennium? **1 000**

13. The SPECIAL WORD a great gross, has a value of ? **1 728**

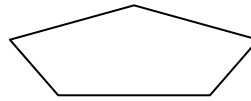
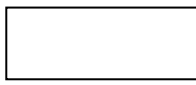
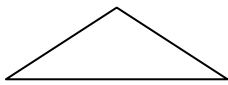
14. How many faces are there on a CUBE? **6**

15. What is the meaning of the word CIRCUMFERENCE? **The perimeter of a circle.**

RE-SEARCHING!

Using your Dawson's Dictionary look up the words that are boldly printed and underlined. Then answer the question related to that word, by drawing a circle around your choice.

1. Which of these **polygons** is a pentagon?



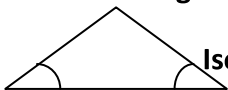
Pentagon

2. Which of these **angles** is acute?

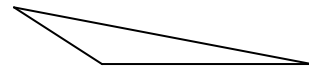
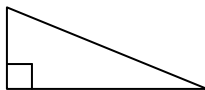


Acute

3. Which of these **triangles** is isosceles?



Isosceles

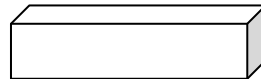
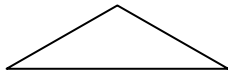
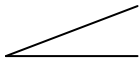


4. Which of these **quadrilaterals** is a parallelogram?



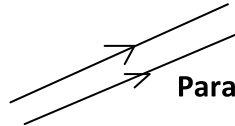
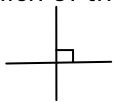
Parallelogram

5. Which of these is a **three-dimensional figure**?



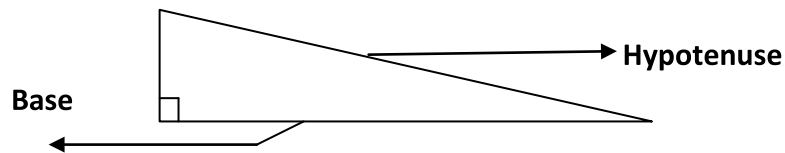
3 Dimensional

6. Which of these represent **parallel lines**?

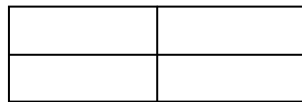
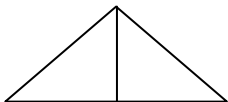


Parallel lines

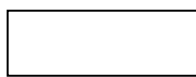
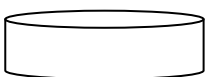
7. On this triangle show the **hypotenuse** and the **base**.



8. Draw **lines of symmetry** on the following figures.



9. Which of these is a **two-dimensional figure**?



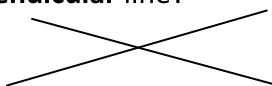
2 Dimensional



10. Which of these figures shows a **perpendicular line**?



Perpendicular



CIRCLING NUMBERS

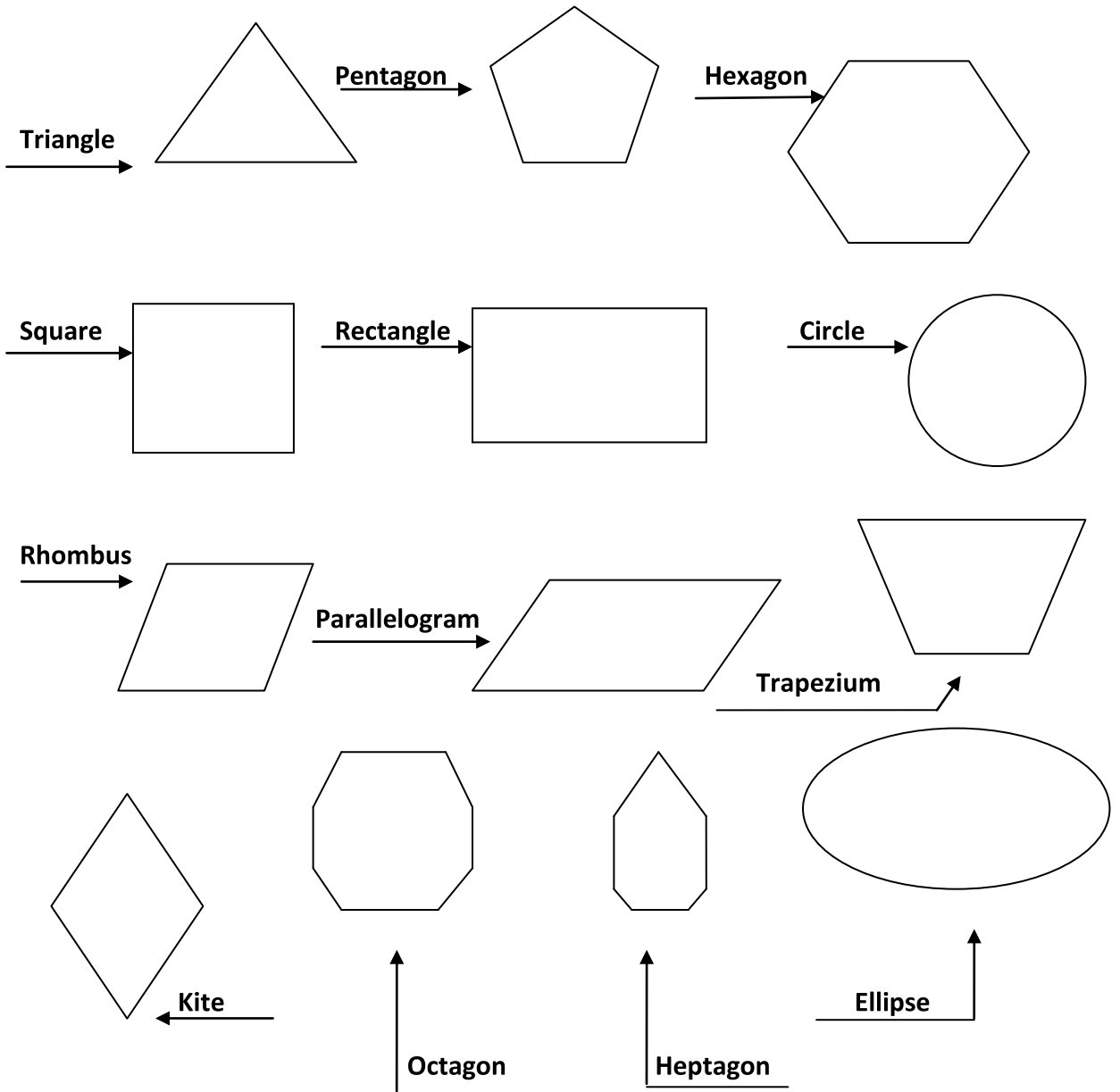
Referring to your **Dawsan's Dictionary**, look up the words printed **boldly** and then circle the answer of your choice.

1. Which of these numbers is called the **product**? $3 \times 2 = 6$
2. Which of these numbers is called the **sum**? $5 + 7 = 12$
3. Which of these numbers is called the **difference**? $14 - 4 = 10$
4. Which of these numbers is called the **quotient**? $12 \div 3 = 4$
5. Which of these numbers is called the **dividend**? $15 \div 5 = 3$
6. What is the freezing point of water on a **Celsius** temperature scale? 5° 10° 0°
7. A **hexagon** is a polygon with how many sides? **6** 5 7
8. Which of the following sums gives an answer that is a **square number**?
 $2 + 6 = 8$ $9 \div 3 = 3$ $5 \times 5 = 25$
9. An **ellipse** looks like a/an ... square **oval** triangle
10. In this fraction, circle the **denominator**: $3 \frac{1}{4}$ **4**
11. Which of the following **symbols** means greater than? $<$ $>$ \equiv
12. Which of these numbers has an **exponent** (circle the exponent)? 4_2 $\sqrt{16}$ $6^{(2)}$
13. In an equilateral **triangle** each angle measures ... **60°** 180° 45°
14. A **three-dimensional figure** has ... length; length and breadth; **length, breadth and height**
15. What is the value of **Pi (π)**? 3,15 2,27 $\frac{22}{7}$
16. In the **order of operations** which sum would you do first in this example? $5 + 2 \times 4 - 1$
 $5 + 2$ **2×4** $4 - 1$
17. The faces on a **pyramid** are ... squares **triangles** circles
18. How many degrees in a **revolution**? 180° **360°** 90°
19. How many in a **score**? **20** 60 100
20. A **trapezoid** is an example of a ... **quadrilateral** polygon triangle

SHAPING-UP

From the selection of answers given, identify each of the following shapes. Refer to **QUADRILATERALS** and **POLYGONS**.

CIRCLE	RECTANGLE	HEPTAGON	PARALLELOGRAM	TRAPEZIUM	RHOMBUS
OCTAGON	TRIANGLE	KITE	SQUARE	ELLIPSE	
HEXAGON				PENTAGON	



DICTIONARY/WORD SEARCH

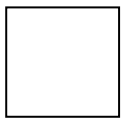
Refer to your Dawsan's Dictionary to find the answers to questions 1 to 20. Then find the words on the grid below. The words may read from left to right, right to left, upwards, downwards or diagonally across.

I	N	U	N	I	N	E	T	O	W	T
T	H	G	I	E	S	Z	E	R	O	H
N	O	R	N	E	V	T	F	O	U	R
A	U	O	E	D	I	E	X	I	P	E
E	R	S	T	R	I	O	S	O	N	E
M	U	S	Y	T	N	E	W	T	E	N
R	U	O	F	Y	T	N	E	V	E	S

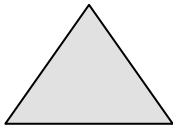
1. The 1st **natural number** is one and the 1st **prime number** is two.
2. A **quadrilateral** has four sides and a **triangle** has three sides.
3. How many years in a **decade** ten and how many in one **score**? twenty.
4. The **square root** of 64 ($\sqrt{64}$) is eight and three **squared** (3^2) is nine.
5. How many sides on the **polygons** called a heptagon seven and on a hexagon six.
6. The **special word** for 144 is gross and for a group of 3 people is trio.
7. The **Roman numeral** V stands for five and LXXIV stands for seventy-four.
8. When adding numbers together the special name given to the answer is the (**starts with s**) sum.
9. In **time** there are 3 600 seconds in one hour.
10. Find another word which has the same meaning as the word **average**. mean.
11. When any number is multiplied by **zero** the answer is always zero.
12. The following symbol (π) has a special name. What is it? (**starts with p**). pi.
13. The sum of two **complementary angles** is ninety.
14. There are 1 000 years in a **millennium**. Is this statement TRUE or FALSE?
15. The prefix for one is uni and the **prefix** for two is bi or di.

WHICH IS NOT A?

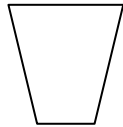
1. Which of the following is not a **quadrilateral**?



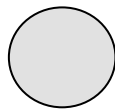
Square



Triangle



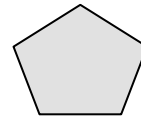
Trapezium



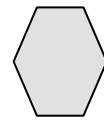
Circle



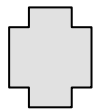
Rectangle



Pentagon



Hexagon



Cross

2. Which of these is not a type of **angle**?

Reflex; Acute; **Isosceles**; **Equilateral**; Obtuse; Straight; **Scalene**; Right

3. Which of these is not a **prefix** that stands for a number ?

Bi; Uni; **Dis**; **Mal**; Semi; **De**; Dodeca; **Un**; Hepta; **Ex**; **Anti**; Septi;

4. Which of these is not a **symbol** used in Maths?

\sphericalangle ; \textcircled{C} ; $<$; \approx ; \therefore ; \textcircled{V} ; \bigcirc ; \neq ; $>$; \textcircled{Z} ; \sim ; $^\circ$;

5. Which of these is not a **palindromic** number?

121; 3 223; 42 424; 11 311; **234 423**; **611**; **89 989**; 123 321

6. Which of these is not a **prime number**?

6; 13; 53; 83; 79; **84**; **4**; 5; 383; 277; **86**; 101; 29 **684 486**

If you are correct, the digits you have chosen will form a palindromic number!

7. Write these numbers in **Roman numerals**.

1; 10; 50; 500; 550; 11 I X L D DL XI

If you are correct, the symbols you have recorded will be palindromic!

8. Which of these is not a **square number**?

9; **7**; 64; **65**; 16; **5**; 196; 441; 1 849; **67**; 2 704; 1 296

If you are correct, the numbers you have chosen will form a palindromic number!

9. Which of these numbers is not **divisible** by 17?

3; 102; 187; 34; **77**; **37**; 204; 170; **73**; 68; 51; 85

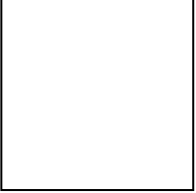

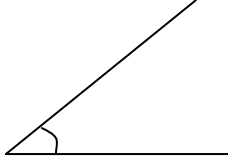
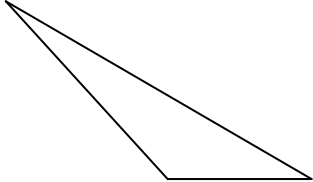
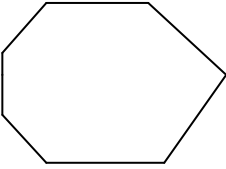
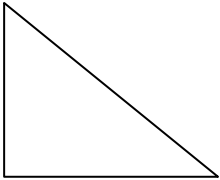
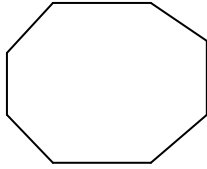
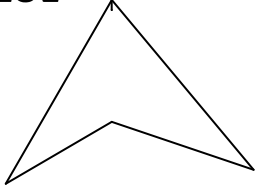

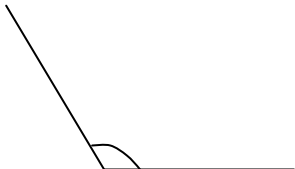
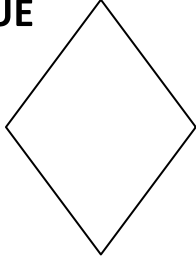
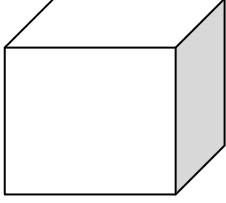
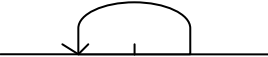
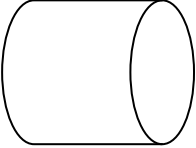
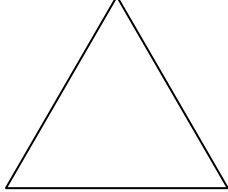
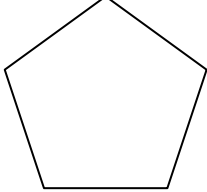
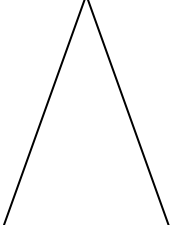
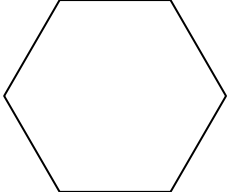
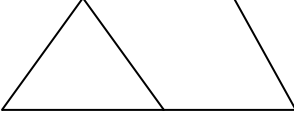
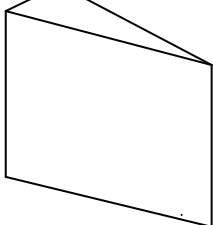
If you are correct, the numbers you have chosen will form a palindromic number!

10. Now form a palindromic number with these numbers:

5th counting no.; 1st prime no.; 3rd natural no.; 2nd composite no.; 9th multiple of 7;
2 dozen. **42366324**

CATEGORICAL SHAPES

1. Colour the four squares with **angles** RED.
2. Colour the four squares with **triangles** GREEN.
3. Colour the four squares with **quadrilaterals** BLUE.
4. Colour the four squares with **polygons** YELLOW.
5. Colour the four squares with **polyhedrons** ORANGE.

BLUE 	RED 	RED 	GREEN 
YELLOW 	GREEN 	YELLOW 	BLUE 
BLUE 	RED 	BLUE 	ORANGE 
RED 	ORANGE 	GREEN 	YELLOW 
GREEN 	YELLOW 	ORANGE 	ORANGE 

IN THE LANGUAGE OF MATHS

Using numbers and symbols rewrite each of the following as mathematical sentences.

For example: Twenty divided by four is not equal to six. $20 \div 4 \neq 6$

- | | |
|--|--|
| 1. One hundred and two is greater than five. | $102 > 5$ |
| 2. Nine hundred and ninety nine is approximately equal to one hundred. | $999 \sim 100$ |
| 3. A right angle is equal to ninety degrees. | $\perp = 90^\circ$ |
| 4. Line AB is parallel to line CD. | $AB \parallel CD$ |
| 5. The line between E and F. | \overline{EF} |
| 6. Triangle PQR is congruent to triangle STU. | $\triangle PQR \cong \triangle STU$ |
| 7. d equals e, therefore e equals d. | $d = e \therefore e = d$ |
| 8. Triangle GHI is similar to triangle JKL. | $\triangle GHI \sim \triangle JKL$ |
| 9. The line CD is perpendicular to line ET. | $CD \perp ET$ |
| 10. Pi is equal to twenty two over seven. | $\pi = \frac{22}{7}$ |
| 11. Angle A, plus angle B, plus angle C equals one hundred and eighty degrees. | $\angle A + \angle B + \angle C = 180^\circ$ |
| 12. Line CD is a line that starts at C through D and continues on. | \overrightarrow{CD} |
| 13. One third is equal to zero comma three recurring. | $\frac{1}{3} = 0,3'$ |
| 16. The square root of sixty four is eight. | $\sqrt{64} = 8$ |
| 17. Two to the power of three is equal to eight. | $2^3 = 8$ |
| 18. Thirty one comma one four is not equal to thirty one and a quarter. | $31,14 \neq 31\frac{1}{4}$ |
| 19. One million in Roman numerals. | \overline{M} |
| 20. Twenty five percent of three hundred and sixty degrees equals a right angle. | $25\% \text{ of } 360^\circ = \perp$ |

TAG-ONS

In this task you must find the answers to the questions and fill them in on the grid provided. A clue to each answer is that the last letter of the previous word is the first letter of the next word. The number of letters in the word is given in brackets

For example:

T	W	O	D	D	A	T	A
---	---	---	---	---	---	---	---

- a) 1st prime number (3) b) Opposite of even. (3) c) A set of information (4)

E	I	G	H	T	H	R	E	E	S	T	I	M	A	T	I	O	N
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

1. a) The number of sides on an octagon. (5)
 b) Number of sides on a Δ . (5)
 c) Another word for approximation. (10)

O	F	I	B	O	N	A	C	C	I	S	O	S	C	E	L	E	S
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

2. a) Second operation in the Order of Operations. (2)
 b) A special sequence of numbers (9)
 c) A triangle with two angles equal and two sides equal. (9)

S	Q	U	A	R	E	D	I	V	I	S	O	R	A	D	I	U	S
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

3. a) A number multiplied by itself is said to be ... (7)
 b) In a division sum, the number by which you are dividing is called the ... (7)
 c) Half the diameter of a circle is called the ... (6)

S	Y	M	M	E	T	R	Y	E	A	R	H	O	M	B	U	S
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

4. a) A line separating a figure into two congruent parts is called Line ... (8)
 b) 365 days in a ... (4)
 c) A parallelogram with 4 sides equal and opposite angles equal is called a ... (7)

Q	U	A	R	T	E	T	R	A	P	E	Z	I	U	M	O	D	E
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

5. a) a group of four singers is called a ... (7)
 b) A quadrilateral with two sides parallel and no angles equal is called a ... (9)
 c) The number that occurs most often in a list is called the ... (4)

U	N	I	N	T	E	R	E	S	T	H	E	R	E	F	O	R	E
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

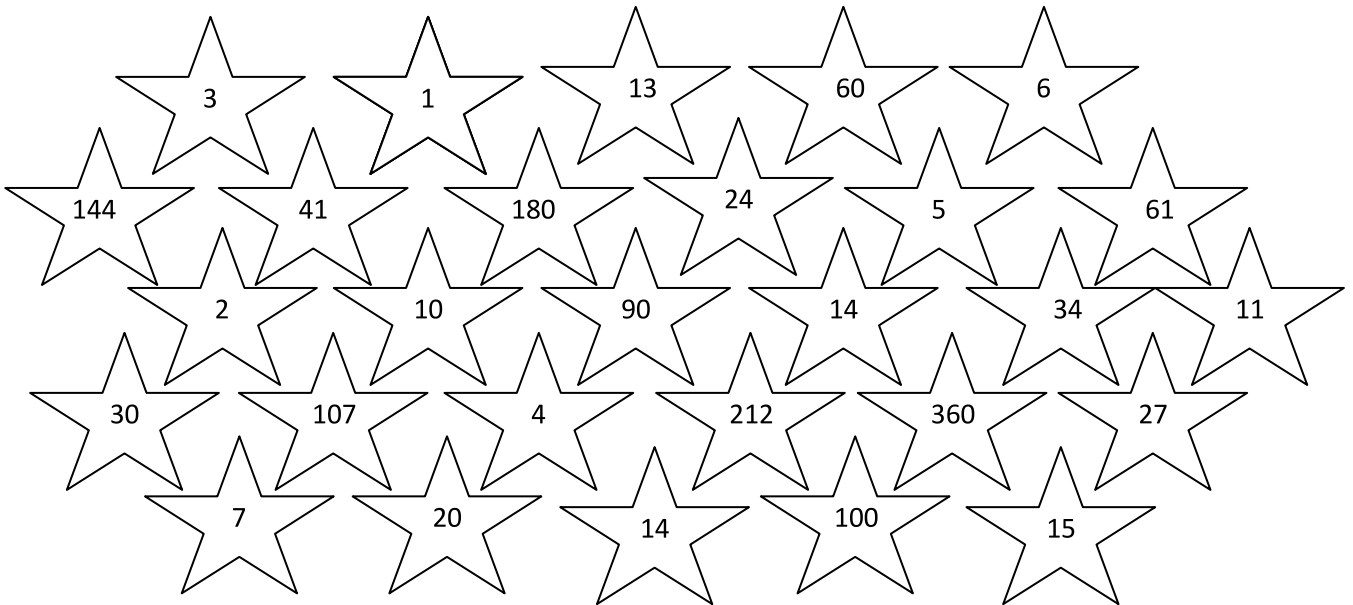
6. a) A prefix that stands for one. (3)
 b) An amount of money which increases over time e.g. money earned on money invested. (8)
 c) The meaning of the Maths symbol \therefore (9)

G	R	O	S	S	P	H	E	R	E	Q	U	I	V	A	L	E	N	T
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

7. a) Special word for 12 dozen. (5)
 b) A solid with all points an equal distance from the centre. (6)
 c) If two or more numbers have the same value, they are said to be ... (10)

IT'S IN THE STARS

All the answers to the following are to be found in the stars. Once you have found the answer colour in the star with a yellow crayon or koki. Colour the left over stars in orange.



- | | |
|---|--|
| <p>1. The SPECIAL NUMBER in a brace. 2</p> <p>3. The number in a BAKER'S DOZEN. 13</p> <p>5. The number of months with 31 days. (TIME) 7</p> <p>7. The value of three to the POWER of three. 27</p> <p>9. The PLACE VALUE of the nine in 1 392. 90</p> <p>11. The total no. of degrees in a QUADRILATERAL. 360°</p> <p>13. The SQUARE ROOT of 121. 11</p> <p>15. The number in five DOZEN. 60</p> <p>17. Boiling pt. (in degrees) on the FAHRENHEIT scale. 212</p> <p>19. The approximate no. of months in a season. (TIME) 3</p> <p>20. The number of quarts in a gallon. (page 65) 4</p> <p>21. Next number in the FIBONACCI sequence: 1;2;3;5;8;13;21; ... 34</p> <p>22. Boiling point (in degrees) on the CELCIUS scale. 100</p> <p>23. The number of singers in a quintet. (SPECIAL WORD) 5</p> | <p>2. The total no. of degrees in a TRIANGLE. 180°</p> <p>4. The no. of days in a fortnight. (TIME) 14</p> <p>6. The value of ROMAN NUMERAL XLI 41</p> <p>8. The value of twelve SQUARED. 144</p> <p>10. The 28th PRIME NUMBER. (page 69) 107</p> <p>12. The no. of edges on a DODECAHEDRON 30</p> <p>14. The number of years in a DECADE. 10</p> <p>16. The no. in the SPECIAL WORD score. 20</p> <p>18. The value of the PREFIX quindecim. 15</p> |
|---|--|

FUN FOLLOW-ON

In this exercise you must work carefully and accurately as the answer to each subsequent question is dependent on your previous answer. So, if you get the first one wrong, you'll get them ALL wrong!!

The words printed boldly are Dictionary references.

1. How many words in the following sequence are spelled incorrectly?
subtrahend; **supplementary; reciprocal;** parallelogram; polyhedron; integer 2
2. Ready for number 2? Multiply your answer by the total number of sides on the following
polygons: a triangle, a nonagon, a heptagon and a decagon. $2 \times (3 + 9 + 7 + 10) = 2 \times 29 = 58$
3. Find the sum of number 2's answer, a score, a brace and a baker's dozen.
(Special words for numbers) $58 + 20 + 2 + 13 = 93$
4. Decrease your answer by the number of faces on 2 **dodecahedrons**. $93 - 24 = 69$
5. Multiply your previous by the 31st **prime number** (page 69). $69 \times 127 = 8763$
6. P O S T is to S T O P as number 5's answer is to? 6 378
7. Divide your answer by the 7th **counting number**. $6\ 378 \div 6 = 1\ 063$
8. Decrease your answer by **Roman numeral LXIII**. $1\ 063 - 63 = 1\ 000$
9. Divide your answer by 50 **decades**. $1\ 000 \div 50 = 2$
10. I hope this hasn't been too difficult for you! Now double your answer and subtract it
from the 12th multiple of 18. (page 75) $12 \times 16 - 4 = 216 - 4 = 212$

My answer is palindromic. Is yours?

FUN SEARCHING

Using the Dawsan's Dictionary find the answers to the following questions. The words typed **boldly** are your dictionary references.

1. What is a **PREFIX** for the number 20?

Icos

2. Which of the following is not a mathematical **SYMBOL**? (Draw the symbol)

< ∴ Δ ≠ ≈ 



3. Look at this **FRACTION**:

$$\frac{3}{4}$$

What name is given to the number below the line?

Denominator

4. What is the name given to an **ANGLE TYPE** that is smaller than 90°?

Acute

5. In **TIME** 168 hours is equal to one

Week

6. Equilateral **TRIANGLES** have 3 angles each measuring degrees.

Sixty

7. The word **MEAN** is another name for the of a group of numbers.

Average

8. How many sides on a **POLYGON** called a nonagon?

Nine

9. Find the answer to this sum which is written in **ROMAN NUMERALS**.

$$XLII - XXXV = \dots\dots$$

Seven

Now take the first letter of each of your answers, and it reads....?

I  **Dawsan's !**

EUREKA!

(Which means: "I have found it!")

Using your dictionary find the answers to the following questions. Write each answer in **WORDS**. In order to help you, the word that you need to look up, is printed in bold.

1. The name of a **polygon** with 10 sides is called a ... **Decagon**
2. The name given to an **angle** smaller ($<$) than 90° is an ... angle. **Acute**
3. In **time** the name given to 168 hours is one ... **Week**
4. In a subtraction sum you get the **minuend**, ... and the difference. **Subtrahend**
5. An **addend** is found in an ... sum. **Addition**
6. The name given to the number written on the top of a **fraction** is the ... **Numerator**
7. The number of sides on a **polygon** called a heptagon is ... **Seven**
8. The name given to a **polygon** with six sides is a ... **Hexagon**
9. The word **mean** means the ... of a group of numbers. **Average**
10. The value of the **Roman numeral** LXX is ... **Seventy**
11. Name of a **quadrilateral** with 2 parallel sides and no equal angles is a **Trapezium**
12. The **prefix** semi stands for a ... **Half**
13. 31 is the ... **prime number**. **Eleventh**
14. The **symbol** \approx means ... **Approximately**
15. A **polygon** with nine sides is called a ... **Nonagon**
16. A **special word** for the number 20 is a ... **Score**
17. In **Time** there are 7 days in a ... **Week**
18. The name given to a **triangle** with all three angles equal to 60° is an **Equilateral**
19. The name given to an **angle** greater than 180° is a ... angle. **Reflex**
20. In **time** find the number of months with 31 days. **Seven**

Now, in order to find out if you scored 100% or not, take the first letter of each of your answers and write them in order on the spaces below. If you're baffled, the clue is in the apple!

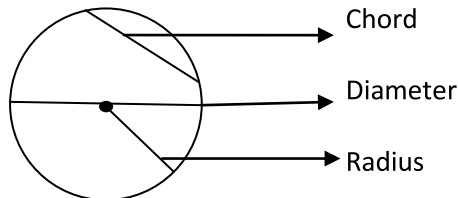
Dawsan's has the answers!

KNOCK-OUT

Cross off all the words as instructed below.

ICOS	ACUTE	SCORE	DL	DEGREE	SQUARE	TRAPEZIUM
TRIANGLE	PARALLEL	YOU	PENTAGON	ARE	QUINT	CHORD
XLII	DIAMETER	HEPTA	A	REFLEX	XXVIII	BRACE
DOZEN	LXXV	STRAIGHT	GROSS	RADIUS	SIMILAR	OCTO
RECTANGLE	HEXAGON	RHOMBUS	ANGLE	KITE	OBTUSE	WINNER

- Find the names of these four ANGLE TYPES: a) Acute b) Obtuse c) Reflex d) Straight
- Find the names of these POLYGONS: a) Triangle b) Rectangle c) Hexagon d) Pentagon
- Find PREFIXES for the following numbers: a) Icos b) Quint c) Octo d) Hepta
- What SPECIAL NAME is given to the following numbers? a) Dozen b) Gross c) Score d) Brace
- What name is given to the following SYMBOLS? a) Degree b) Angle c) Similar d) Parallel
- Find the following the following numbers in ROMAN NUMERALS: a) XLIV b) LXXV c) XXVIII d) DL
- Find the names of the following QUADRILATERALS: a) Square b) Kite c) Rhombus d) Trapezium
- Name the following parts of a **CIRCLE**:



Write down the words remaining: YOU ARE A WINNER!

CROSSWORD/NUMBER

This works the same way as a crossword puzzle, except you are filling in numbers instead of words. Fill in the answers to the questions on the grid provided. The last ten clues are tricky, as they depend on the accuracy of your answers. You will not be able to work consecutively. Work on the clues you have already solved.

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

Clues ACROSS:

1. A dozen + 1st prime number.
3. $(2 \times 100) + (8 \times 10) + (9 \times 1)$
5. 7^2
7. 383×19
8. R4 000 – R672
9. Order of operations: $190 + 36 \times 10$
11. $686 \div 3^{\text{rd}}$ counting number
13. Value of Roman numeral CCCLXXXIII
15. $7744 \div 0,25$
16. Number of days in 51 fortnights
18. Three gross – a brace
20. Dividend of 3 and 87
22. 5-Across multiplied by 27-Across
23. 3-Down plus 7-Across
25. Two less than 22-Down
26. 22-Down multiplied by 24-Down
27. Last two digits of 26-Across

Clues DOWN:

1. 7th prime number.
2. 476×9
3. 0,275kg = grams
4. 9 centuries + 3 decades
5. Number of eggs in 354 dozen.
6. Supplementary \angle of 82°
10. $(5 \times 10^4) + (9 \times 10^3) + (9 \times 10^2) + (7 \times 10^1) + (6 \times 10^0)$
11. CXIX \times III
12. Degrees in a revolution – 26°
13. Number of minutes from 6:00 to 12:04
14. Product of 5 and 62
17. Millennium + 2 decades + 9 years
19. 8-Across plus 24-Down
20. 11-Across minus 6-Down
21. The second digit is the sum of the other two.
22. Five less than 24-Down
24. First two digits of 20-Across

Check it out

Write the correct number sentence for each of the following problems. Then work out the sum to see if it is correct:

The first one has been done for you.

1. The third **multiple** of four divided by the first **prime number** equals half a **dozen**.

$$12 \div 2 = 6 \quad \checkmark$$

2. A **baker's dozen** added to the **fourth prime number** equals two **decades**.

$$13 + 7 = 20$$

3. A **millennium** divided by two and a half **score** equals a score.

$$1\ 000 \div 50 = 20$$

4. The number of degrees in a **triangle** minus the number of degrees in half a **revolution** equals the first **counting number**.

$$180 - 180 = 0$$

5. **Roman numeral** XCV minus Roman numeral LXX equals Roman numeral XXV.

$$95 - 70 = 25$$

6. The sum of the **factors** of 24 is equal to the **Highest Common Factor** of 15 and 12.

$$1 + 2 + 3 + 4 + 6 + 8 + 12 + 24 = 60$$

7. If the first **natural number** is the **multiplier** and the **multiplicand** is 34, the **product** is equal to the multiplicand.

$$1 \times 34 = 34$$

8. Five and a half **decades** is equal to the sum of three **baker's dozen** plus 4 **squared**.

$$55 = 39 + 16$$

9. A **great gross** minus a **millennium plus five centuries is equal to** is equal to Roman numeral CCXXVIII.

$$1\ 728 - 1\ 000 - 500 = 228$$

10. The number of days in April plus the number of days in a leap year is equal to the 11th multiple of 12 multiplied by the fourth counting number.

$$30 + 366 = 11 \times 12 \times 3 = 396$$

Attention Please!

You must follow the instructions very carefully and cross off the numbers as you are instructed. If correct, you will be left with the solution to the following problem:

Using the numbers 1 to 9 in correct sequential order (only once per number) and only + or -, create a sum with an answer of 100.

25	87	3	34	93	31	55	78	88	4	17	53	83	5	68
12														76
37														57
66														41
72														20
32														67
97														89
														44
														74
														8
														95
														81
														71
														86
														51
														33
														47
82	91	23	30	43	60	80	9	49	85	99	40	10	36	84

↑ START

Cross off:

- a) 17; 34; 51; 68
- b) 22; 33; 44; 55; 66
- c) 23; 57; 32; 60; 71; 18
- d) 31; 37; 41; 43; 47; 53
- e) 81; 83; 85; 87; 89; 91; 93; 95; 97; 99
- f) 72; 74; 76; 78; 80; 82; 84; 86; 88
- g) 16; 25; 36; 49
- h) 10; 20; 30; 40

16
22

Now fill in the "left-over numbers" (as they appear) in the boxes below.

$$\boxed{12} + \boxed{3} - \boxed{4} + \boxed{5} + \boxed{67} + \boxed{8} + \boxed{9} = 100$$



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