



Mathematical Reasoning

- 1 Solve for the missing value
 $? + 371 = 398$

A 25	B 27	C 19
D 21	E 41	F 35

- 2 Divide these numbers and find the remainder if any
 $16 \div 8$

A 5 remainder 4	B 5 remainder 1
C 1 remainder 5	D 3 remainder 1
E 2 remainder 0	F 2 remainder 5

- 3 Divide these numbers and find the remainder if any

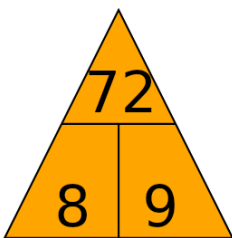
$$\frac{70}{9}$$

A 10 remainder 6	B 8 remainder 8
C 6 remainder 9	D 8 remainder 7
E 9 remainder 9	F 7 remainder 7

- 4 Divide these numbers

A 15	B 19	C 18
D 14	E 28	F 24

- 5 Which multiplication fact comes from this fact family



A $72 \times 8 = 9$
B $90 \times 9 = 10$
C $110 \times 10 = 11$
D $9 \times 8 = 72$

- 6 Solve for the missing value
 $954 - ? = 690$

A 208	B 288	C 240
D 336	E 184	F 264

- 7 Solve this problem:

5 koalas together eat 30 apples. They each eat the same number. How many apples does each koala eat?

A 800	B 6	C 5
D -30	E 40	F 0

- 8 Solve this problem:

A koala eats 30 grams of apples. Each apple weighs 6 grams. How many apples were eaten?

A 3	B -30	C 0
D 24	E 0	F 5



Mathematical Reasoning

- 9 Each octopus has 8 legs. How many legs would there be on 7 octopii?

 $\times 7$

A	58
B	54
C	56
D	60

- 10 Multiply these numbers

$$\begin{array}{r} 8523 \\ \times 2 \\ \hline \end{array}$$

A	1,705	B	14,319
C	17,046	D	20,114
E	14,489	F	17,728

- 11 Solve this problem:

Each koala eats 8 apples. There are 9 koalas. Each apple weighs 9 grams. How many apples are eaten in total?

A	72	B	66	C	720
D	81	E	86	F	17

- 12 Find the right equation to represent this problem:

How many apples are eaten in total if 2 koalas each eat 7 apples?

A	2×27	B	2×7
C	$2/7$	D	$2/7$
E	$2 + 7$	F	$2 - 7$

- 13 Find the right equation to represent this problem:

42 apples, each weighing 55 grams, are eaten by 6 koalas. How many apples does each koala eat if each koala eats the same number?

A	$55/42$	B	55×42
C	$42/6$	D	42×6
E	55×42	F	42×6

- 14 Find the equation that best represents this sentence

twelve minus m is equal to z

A	$m \times z = 12$	B	$z - 12 = m$
C	$12 - m = z$	D	$12 + z = m$
E	$m + z = 12$	F	$m - 12 = z$

- 15 Find the right equation to represent this problem:

24 pieces of candy are split evenly amongst 3 kids. How many pieces of candy does each kid get?

A	$24/3$	B	24×23
C	$24 + 3$	D	24×3
E	$3 - 24$	F	$24 - 3$

- 16 Solve for the missing value

$$20 + 55 + ? = 78$$

A	3	B	10	C	8
D	4	E	5	F	6

**Mathematical Reasoning**

17 Solve for the missing value
 $? - 229 = 466$

A 833	B 488	C 557
D 695	E 902	F 718

18 Solve for the missing value
 $? - 333 - 242 = 32$

A 727	B 507	C 747
D 607	E 407	F 567

19 Find the number that balances the equation
 $29 - 3 - 18 = 13 + 12 - ?$

A 0	B 17	C 20
D 12	E 21	F 19

20 Solve for the missing value
 $? - 16 - 18 = 47$

A 63	B 61	C 81
D 89	E 91	F 77

21 Estimate the product by rounding each number to its leading digit.

$$81 \times 9 = ?$$

A approx 729
B approx 7,200
C approx 72
D approx 720

22 Estimate the sum by rounding each number to the nearest 10

$$71 + 59 = ?$$

A 100	B 130
C 140	D 160

23 Estimate the difference by rounding each number to the nearest 10

$$88 - 69 = ?$$

A 20	B 30
C 10	D 40

24 Estimate the product by rounding each number to its leading digit.

$$714 \times 6 = ?$$

A approx 4,200
B approx 4,900
C approx 4,284
D approx 420



Mathematical Reasoning

- 25** Estimate the sum by rounding each number to the nearest 10

$$931 + 69 = ?$$

A	980	B	970
C	1,030	D	1000

- 26** Estimate the difference by rounding each number to the nearest 10

$$338 - 58 = ?$$

A	260	B	310
C	280	D	270

- 27** Estimate the sum by rounding each number to the nearest 100

$$303 + 497 = ?$$

A	500	B	700
C	1,000	D	800

- 28** Estimate the difference by rounding each number to the nearest 100

$$702 - 298 = ?$$

A	600	B	400
C	700	D	500

- 29** Estimate the product by rounding each number to its leading digit.

$$61 \times 11 = ?$$

A	approx 610	B	approx 671
C	approx 60	D	approx 600

- 30** Estimate the quotient by rounding each number to its leading digit.

$$586 \div 2 = ?$$

A	approx 293
B	approx 3,000
C	approx 300
D	approx 400

- 31** Estimate the quotient by rounding each number to its leading digit.

$$81 \div 21 = ?$$

A	approx 40	B	approx 5
C	approx 3	D	approx 4

- 32** Estimate the quotient by rounding each number to its leading digit.

$$786 \div 38 = ?$$

A	approx 200	B	approx 21
C	approx 20	D	approx 10



Mathematical Reasoning

33 What rule turns each input into its output?

Input	Output
1	3
2	6
5	15
6	18
7	21

A

multiply by 3

B

subtract 8

C

add 7

D

subtract 2

34 Does this rule create each output from its input?

Rule: multiply by 2

Input	Output
8	1
48	6
56	7
64	8
72	9

A

Yes

B

No