MINISTRY OF EDUCATION
Te Tāhuhu o te Mātauranga

GloSS

INTERVIEW 4

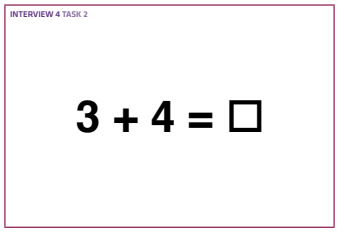
TASK 1

ACTION: *Place 6 counters of the same colour on the table.*
SAY: How many counters are there?

Stage	Strategy observed
0	**Student cannot count 6 objects**
1	**Correctly counts the 6 objects**

DECISION: If "1" is circled in **Task 1**, CONTINUE the interview.
If "0" is circled, rate the student at Stage 0 and STOP the interview

TASK 2



SAY: Please hold out your hands for me.
SAY: Here are 3 counters.
SAY: Here are another 4 counters.
SAY: How many counters have you got altogether?

ACTION: *Place 3 counters in the student's hand.*
ACTION: *Place 4 counters in their other hand.*
ACTION: *Close the student's hands to encourage imaging.*
ACTION: *Allow the student to open their hands if they find imaging difficult.*

Stage	Strategy observed
1	**Cannot solve the addition problem** (Stage 1)
2–3	**Physically counts all the objects from 1 on materials** (Stage 2) **Correctly counts all the items from 1 by imaging** (Stage 3)
4 or higher	**Counts on** e.g., 4, 5, 6, 7 **or** 5, 6, 7 **Knows** 3 + 4

DECISION: If **either** "2–3" **or** "4" are circled in **Task 2**, CONTINUE the interview.
If "1" is circled, STOP the interview. If in any doubt, CONTINUE the interview.

INTERVIEW 4 TASK 2

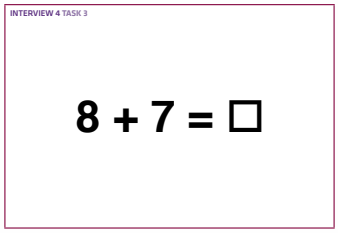
$$3 + 4 = \square$$

INTERVIEW 4 TASK 3

$$8 + 7 = \square$$

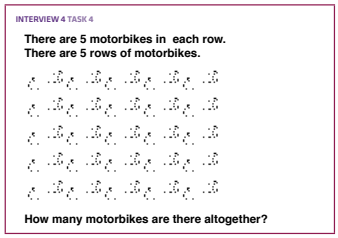
TASK 3

ACTION: *Place 8 counters under a card then place 7 under another card.*
SAY: Here are 8 counters, and here are 7 counters.
How many counters are there altogether?



Stage	Strategy observed
3	**Cannot solve the problem** (After removing the cards – Stage 1) **Counts all objects from 1 on materials** (Stage 2) **e.g.,** 1, 2, 3, …, 15 **Counts all objects from 1 by imaging** (Stage 3) **e.g.,** 1, 2, 3, …, 15
4	**Counts on** (Stage 4) **e.g.,** 9, 10, 11, … , 14, 15 **or** 8, 9, 10, …, 14, 15
Early 5 or higher	**Uses a part-whole strategy e.g.,** - Making to ten e.g., 8 + 2 = 10; 10 + 5 = 15 - Doubling with compensation e.g., 7 + 7 = 14; 14 + 1 = 15 **or** 8 + 8 = 16; 16 – 1 = 15 - Addition fact e.g., 8 + 7 = 15

TASK 4



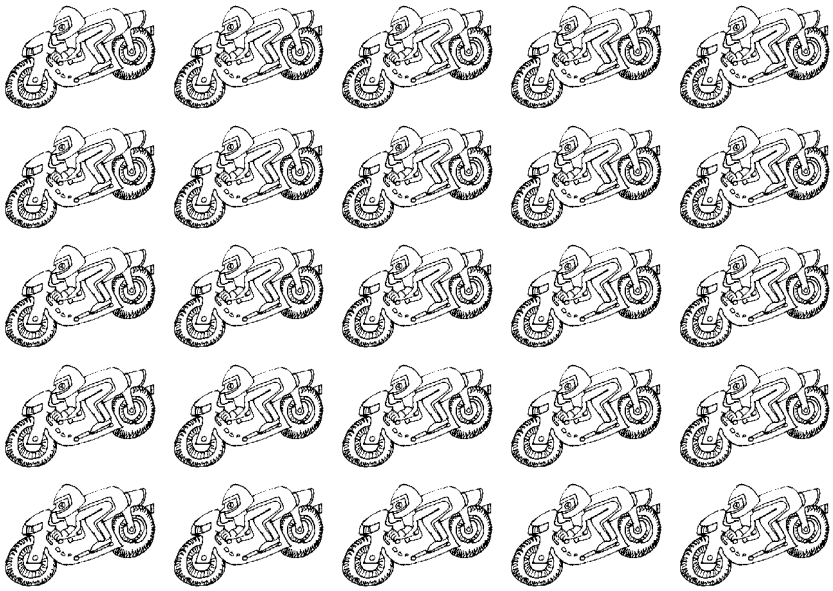
SAY: There are 5 motorbikes in each row.
SAY: There are 5 rows of motorbikes.
SAY: How many motorbikes are there altogether?

ACTION: *Sweep one row with your finger*
ACTION: *Point to each row one by one*

Stage	Strategy observed
3	**Cannot solve the problem** **Counts all objects from 1 on materials** (Stage 2) **e.g.,** 1, 2, 3, 4, **5**, 6, …, **25** **Counts all objects from 1 by imaging** (Stage 3) **e.g.,** 1, 2, 3, 4, **5**, 6, …, **25**
4	**Skip counting** (Stage 4) **e.g.,** 5, 10, 15, 20, 25
Early 5 or higher	**Uses an additive or multiplicative strategy e.g.,** - Repeat addition e.g., 5 + 5 + 5 + 5 + 5 = 25 - Additive strategies e.g., 5 + 5 = 10; 10 + 10 = 20; 20 + 5 = 25 - Multiplication strategies e.g., 4 × 5 = 20; 20 + 5 = 25 - Multiplication fact e.g., 5 × 5 = 25

INTERVIEW 4 TASK 4

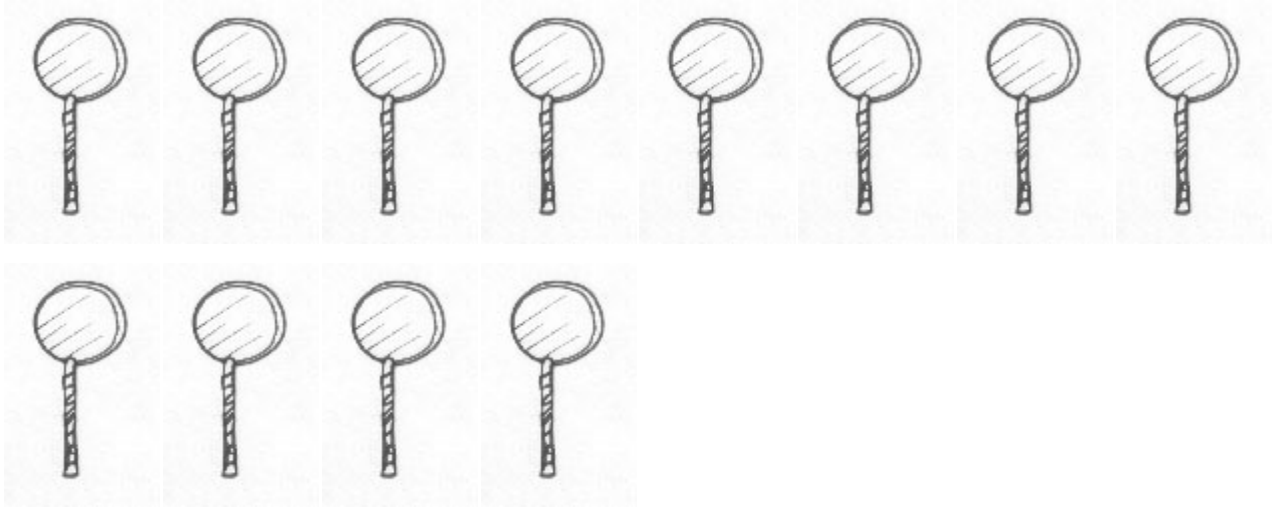
There are 5 motorbikes in each row.
There are 5 rows of motorbikes.



How many motorbikes are there altogether?

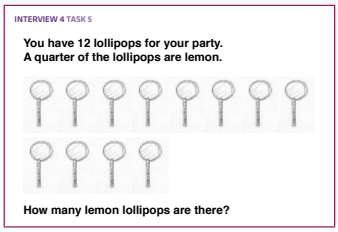
INTERVIEW 4 TASK 5

You have 12 lollipops for your party.
A quarter of the lollipops are lemon.



How many lemon lollipops are there?

TASK 5



ACTION: *Provide 12 counters (lollipops).*
Allow the student access to these counters if necessary.

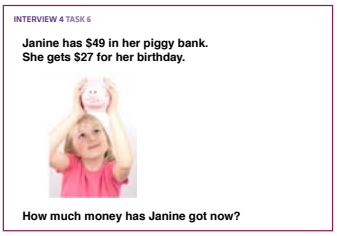
SAY: You have 12 lollipops for your party.
A quarter of the lollipops are lemon.
How many lemon lollipops are there?

Note: Say "fourth" instead of "quarter" if this is more familiar to your student.

Stage	Strategy observed
2–4	**Cannot solve the problem** **Equally shares the lollipops, on materials or by imaging** (Stage 2–4)
Early 5 or higher	**Uses an additive or multiplicative strategy e.g.,** - Additive partitioning e.g., 6 + 6 = 12 and 3 + 3 + 3 + 3 = 12 - Multiplication or division strategy e.g., 3 × 3 = 9; 9 + 3 = 12 - Multiplication or division fact e.g., 4 × 3 = 12 or 12 ÷ 4 = 3

DECISION: If **any** "E5" are circled in **Tasks 3, 4** or **5**, **or** if the "4s" are circled in **both Task 3** and **Task 4**,CONTINUE the interview.
Otherwise STOP the interview. If in any doubt, CONTINUE the interview.

TASK 6



SAY: Janine has $49 in her piggy bank.
She gets $27 for her birthday.
How much money has Janine got now?

Stage	Strategy observed
Early 5	**Cannot solve the problem** or **Uses an earlier numeracy stage** **Counting on** (Stage 4) **e.g.,** 49, 50, 51, … , 76 **Skip counting in tens and ones** (Stage 4) **e.g.,** [49] 59, 69, 70, 71, ..., 76 **Repeat addition in tens and ones** (Stage E5) **e.g.,** 49 + 10 = 59; 59 + 10 = 69; 70, 71, ..., 76 **Mix of counting and part-whole strategies** (Stage E5) **e.g.,** [49] 59, 69; 69 + 1 = 70; 70 + 6
5 or higher	**Uses a part-whole strategy e.g.,** - Place value partitioning e.g., (40 + 20) + (9 + 7) = 76 - Adding on in parts e.g., 49 + 20 = 69; 69 + 1 + 6 = 76 **or** 40 + 27 = 67; 67 + 9 = 76 - Making to ten e.g., 49 + 27 = (49 + 1) + (27 – 1) = 50 + 26 = 76

INTERVIEW 4 TASK 6

Janine has $49 in her piggy bank.
She gets $27 for her birthday.

How much money has Janine got now?

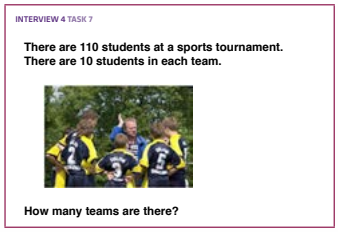
INTERVIEW 4 TASK 7

There are 110 students at a sports tournament.
There are 10 students in each team.

How many teams are there?

TASK 7

SAY: There are 110 students at a sports tournament.
There are 10 students in each team.
How many teams are there?

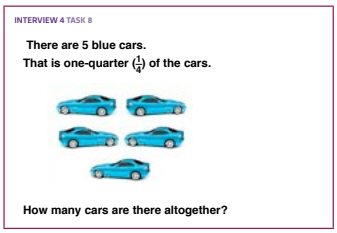


Stage	Strategy observed
Early 5	**Cannot solve the problem** or **Uses an earlier numeracy stage** **Skip counting** (Stage 4) **e.g.,** 10, 20, 30, 40, ..., 110 **Repeated addition** (Stage E5) **e.g.,** 10 + 10 + 10 + 10 + … + 10 = 110
5 or higher	**Uses an additive or multiplicative strategy e.g.** - Additive strategies e.g., 10 + 10 = 20; 20 + 20 = 40; 40 + 40 = 80; 8 + 2 + 1 = 11 - Derive from multiplication facts e.g., 10 × 10 = 100; 100 + 10 = 110; 10 + 1 = 11 - Multiplication facts e.g., 11 × 10 = 110 so the answer is 11

TASK 8

SAY: There are 5 blue cars.
That is one-quarter of the cars.
How many cars are there altogether?

Note: Say "fourth" instead of "quarter" if this is more familiar to your student.



Stage	Strategy observed
Early 5	**Cannot solve the problem** or **Uses an earlier numeracy stage** **Counting strategy** (Stage 2–4) **e.g.,** 1, 2, 3, 4, **5**, 6, …, **10**, 11, …, **15**, 16, …, **20**
5 or higher	**Uses an addition or multiplication strategy e.g.,** - Additive strategies e.g., 5 + 5 = 10; 10 + 5 = 15; 15 + 5 = 20 - Multiplication facts e.g., 5 × 4 = 20 or 20 ÷ 4 = 5

DECISION: If **any** "5" are circled in **Tasks 6, 7** or **8**, CONTINUE the interview.
If **only** "E5" are circled, STOP the interview. If in any doubt, CONTINUE the interview.

INTERVIEW 4 TASK 8

There are 5 blue cars.

That is one-quarter ($\frac{1}{4}$) of the cars.

How many cars are there altogether?

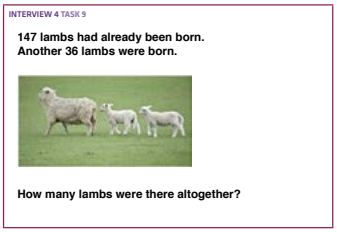
INTERVIEW 4 TASK 9

147 lambs had already been born.
Another 36 lambs were born.

How many lambs were there altogether?

TASK 9

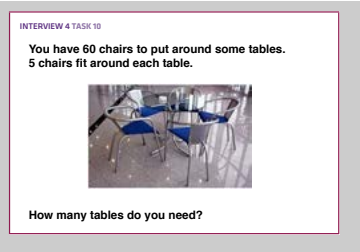
SAY: 147 lambs had already been born.
Another 36 lambs were born.
How many lambs were there altogether?



Stage	Strategy observed
5	**Cannot solve the problem** or **Uses an earlier numeracy stage** **Skip counting in tens and ones** (Stage 4) **e.g.,** [147] 157, 167, 177, 178, 179, …, 183 **Repeat addition in tens and ones** (Stage E5) **e.g.,** 147 + 10 + 10 + 10 + 1 + 1 + … + 1 = 183 **Mix of counting and part-whole strategies** (Stage E5) **e.g.,** 147 + 10 + 10 + 10 = 177; 177 + 3 + 3 = 183 **Attempts part-whole strategy with error** (Stage E5) **e.g.,** 173 (no carrying)
Early 6 or higher	**Uses a part-whole strategy e.g.,** - Place value partitioning e.g., (140 + 30) + (7 + 6) = 170 + 13 = 183 - Adding on in parts e.g., 147 + 30 = 177; 177 + 3 + 3 = 183 **or** 140 + 36 = 176; 176 + 4 + 3 = 183

TASK 10

SAY: You have 60 chairs to put around some tables.
Five chairs fit around each table.
How many tables do you need?



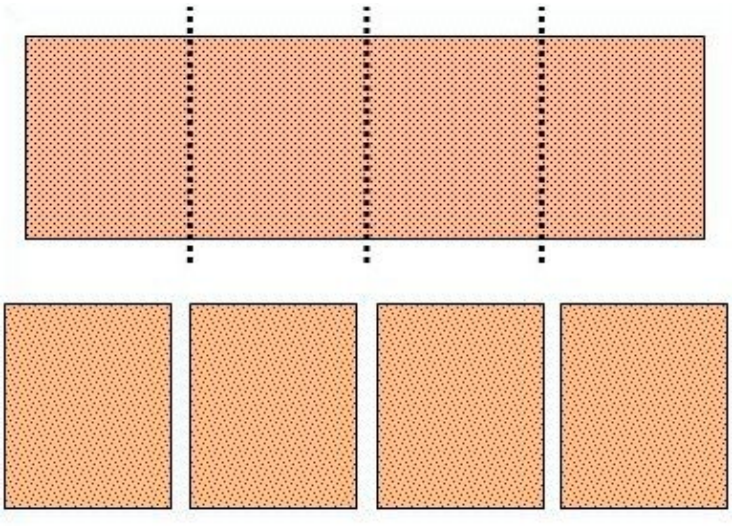
Stage	Strategy observed
5	**Cannot solve the problem** or **Uses an earlier numeracy stage** **Uses an additive strategy e.g.,** - Skip counting (Stage 4) e.g., 5, 10, 15, 20, 25, ..., 60 or 60, 55, 50, …, 5 - Repeated addition (Stage E5) e.g., 5 + 5 + 5 + ... + 5 = 60 - Doubling additively (Stage 5) e.g., 5 + 5 = 10; 10 + 10 = 20; 20 + 20 + 20 = 60
Early 6 or higher	**Uses a multiplicative strategy e.g.,** - Doubling and halving e.g., 6 × 10 = 60; 12 × 5 = 60 so the answer is 12 - Derives from multiplication facts e.g., 10 × 5 = 50; 2 × 5 = 10; 10 + 2 = 12 - Multiplication facts e.g., 5 × 12 = 60 or 60 ÷ 5 = 12

INTERVIEW 4 TASK 10

You have 60 chairs to put around some tables.
5 chairs fit around each table.

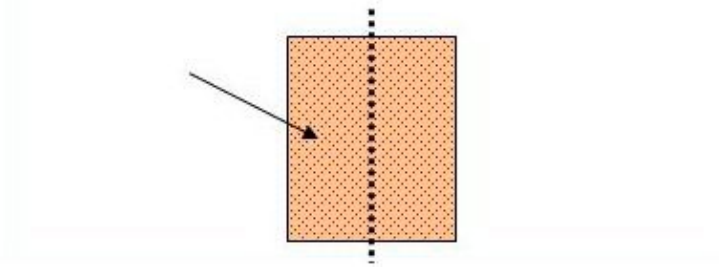
How many tables do you need?

INTERVIEW 4 TASK 11



You cut a lamington into 4 equal pieces.

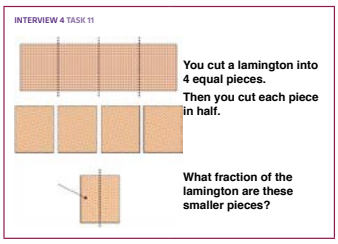
Then you cut each piece in half.



What fraction of the lamington are these smaller pieces?

TASK 11

SAY: You cut a lamington into 4 equal pieces.
Then you cut each piece in half.
What fraction of the lamington are these smaller pieces?

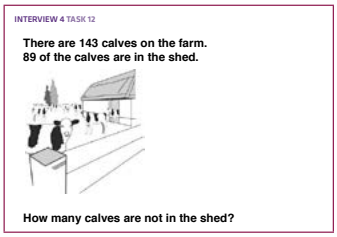


Stage	Strategy observed
5	**Cannot solve the problem OR Uses an earlier numeracy stage** **Counting strategy** (Stage 4) **e.g.,** 1, 2, 3, ..., 8 so the pieces are eighths
Early 6 or higher	**Uses an additive or multiplicative strategy e.g.,** - Additive strategy e.g., 2 + 2 + 2 + 2 = 8, so these pieces are quarters, and the smaller ones are eighths - Multiplicative strategy e.g., 4 × 2 = 8 so the pieces are eighths

DECISION: If **any** "E6" are circled in **Tasks 9, 10** or **11**, CONTINUE the interview.
If **only** "5" are circled, STOP the interview. If in any doubt, CONTINUE the interview.

TASK 12

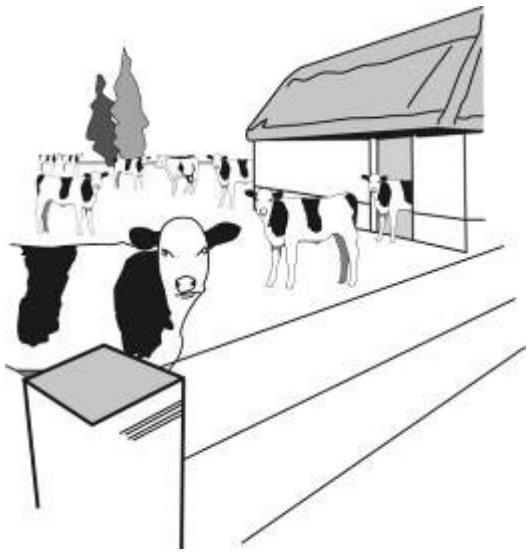
SAY: There are 143 calves on the farm.
89 of the calves are in the shed.
How many calves are not in the shed?



Stage	Strategy observed
Early 6	**Cannot solve the problem** or **Uses an earlier numeracy stage** **Mix of counting and part-whole strategies** (Stage E5) **e.g.,** [89] 99, 109, ..., 139; 139 + 1 = 140; 140 + 3 = 143; 50 + 1 + 3 **Attempts part-whole strategy with error** (Stage 5) **e.g.,** 143 – 90 = 53; 53 – 1 = 52 (compensates in the wrong direction)
6 or higher	**Uses a part-whole strategy e.g.,** - Place value partitioning e.g., (140 – 80) + (3 – 9) = 60 – 6 = 54 - Reversibility e.g., 89 + 1 = 90; 90 + 10 = 100; 100 + 43 = 143; 1 + 10 + 43 = 54 - Rounding and compensation e.g., 143 – 90 = 53; 53 + 1 = 54 - Subtracting in parts e.g., 143 – 80 = 63; 63 – 9 = 54 - Equal additions e.g., 144 – 90 = 54

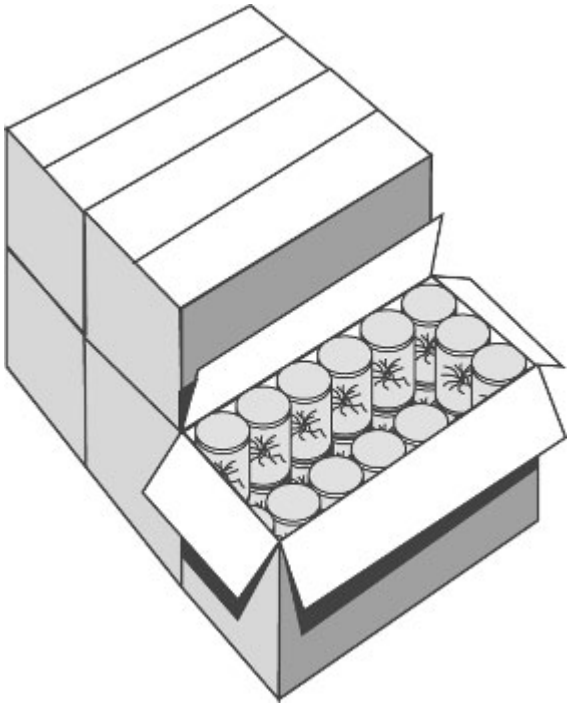
INTERVIEW 4 TASK 12

There are 143 calves on the farm.
89 of the calves are in the shed.



How many calves are not in the shed?

INTERVIEW 4 TASK 13

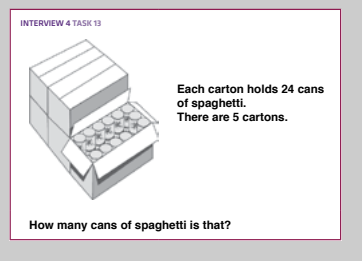


Each carton holds 24 cans of spaghetti.
There are 5 cartons.

How many cans of spaghetti is that?

TASK 13

SAY: Each carton holds 24 cans of spaghetti.
There are 5 cartons.
How many cans of spaghetti is that?



Stage	Strategy observed
Early 6	**Cannot solve the problem** or **Uses an earlier numeracy stage** **Uses an additive strategy e.g.,** - Doubling additively (Stage 5) e.g., 24 + 24 = 48; 48 + 48 = 96; 96 + 24 = 120
6 or higher	**Uses a multiplicative strategy e.g.,** - Place value partitioning e.g., 5 × 24 = (5 × 20) + (5 × 4) = 100 + 20 = 120 - Doubling and halving e.g., 5 × 24 = 10 × 12 = 120 - Derived from a known fact e.g., 25 × 5 = 125; 125 – 5 = 120

TASK 14

SAY: There are 8 swans on the lake.
The other two-thirds of the birds on the lake are ducks.
How many ducks are there on the lake?

Stage	Strategy observed
Early 6	**Cannot solve the problem** or **Uses an earlier numeracy stage** **Uses additive strategies only** (Stage 5) **e.g.,** 8 + 8 + 8 = 24 so 24 birds in total; 8 + 8 = 16
6 or higher	**Uses multiplicative strategies e.g.,** 3 × 8 = 24 so 24 birds in total **then** multiplies (or adds) to get i.e., 2 × 8 = 16 [**or** 8 + 8 = 16] **or** $1 - \frac{2}{3} = \frac{1}{3}$; $\frac{1}{3} = 8$; $\frac{2}{3} = 2 \times 8 = 16$

DECISION: If **any** "6" are circled in **Tasks 12, 13** or **14**, CONTINUE the interview.
If **only** "E6" are circled, STOP the interview. If in any doubt, CONTINUE the interview.

INTERVIEW 4 TASK 14

There are 8 swans on the lake.

The other two-thirds ($\frac{2}{3}$) of the birds on the lake are ducks.

How many ducks are there on the lake?

INTERVIEW 4 TASK 15

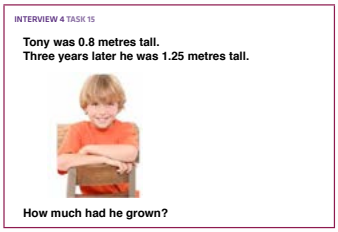
Tony was 0.8 metres tall.

Three years later he was 1.25 metres tall.

How much had he grown?

TASK 15

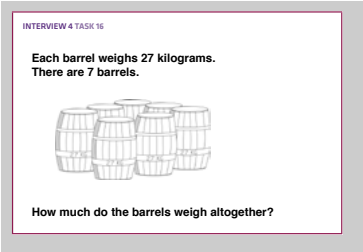
SAY: Tony was 0.8 metres tall.
Three years later he was 1.25 metres tall.
How much had he grown?



Stage	Strategy observed
6	**Cannot solve the problem** or **Uses an earlier numeracy stage** **Misunderstands decimal place value** (Stage 6) **e.g.,** - Ignores the decimal points e.g., 125 – 8 = 117 **or** 125 – 80 = 45 [Check to see if they self-correct to 0.45 or 45cm then code as "E7"] - Treats numbers after the decimal as whole numbers e.g., 1.25 – 0.8 "=" 1.17
Early 7 or higher	**Uses part-whole strategies with decimal place value understanding e.g.,** - Place value partitioning e.g., (1.2 – 0.8) + (0.05 – 0) = 0.4 + 0.05 = 0.45 - Making to ones e.g., 0.8 + 0.2 = 1.0; 1.0 + 0.25 = 1.25; 0.2 + 0.25 = 0.45 - Equal addition e.g., 1.45 – 1.0 = 0.45

TASK 16

SAY: Each barrel weighs 27 kilograms.
There are 7 barrels.
How much do the barrels weigh altogether?



Stage	Strategy observed
6	**Cannot solve the problem** or **Uses an earlier numeracy stage** **Uses additive strategies** (Stage 5) **e.g.,** 27 + 27 = 54; 54 + 54 = 108; 108 + 108 = 216; 216 – 27 = 189 **Uses a mix of multiplicative and additive strategies** (Stage 6) **e.g.,** 20 × 7 = 140; 140 + 7 + 7 + 7 + 7 + 7 + 7 + 7 = 189
Early 7 or higher	**Uses a multiplicative strategy e.g.,** - Place value partitioning with basic facts e.g., (20 × 7) + (7 × 7) = 140 + 49 = 189 **or** (7 × 30) - (7 × 3) = 210 - 21 = 189 - Derive from basic facts e.g., (25 × 4) + (25 × 3) = 175; 175 + 2 × 7 = 189 **or** 10 × 7 = 70 so 20 × 7 = 140; 7 × 5 = 35; 7 × 2 = 14; 140 + 35 + 14 = 189

INTERVIEW 4 TASK 16

Each barrel weighs 27 kilograms.
There are 7 barrels.

How much do the barrels weigh altogether?

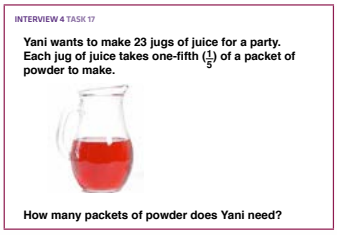
INTERVIEW 4 TASK 17

Yani wants to make 23 jugs of juice for a party.
Each jug of juice takes one-fifth ($\frac{1}{5}$) of a packet of powder to make.

How many packets of powder does Yani need?

TASK 17

SAY: Yani wants to make 23 jugs of juice for a party.
Each jug of juice takes one-fifth of a packet of powder to make.
How many packets of powder does Yani need?

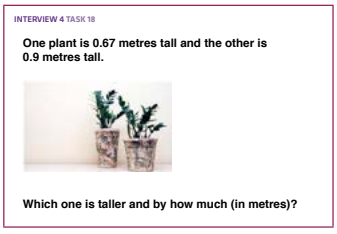


Stage	Strategy observed
6	**Cannot solve the problem** or **Uses an earlier numeracy stage** **Uses additive strategies** (Stage 5) **e.g.,** 5 + 5 + 5 + 5 = 20 so 4 packets make 20 jugs, 1 more sachet makes 25 jugs
Early 7 or higher	**Uses a multiplicative strategy e.g.,** - Division with remainder e.g., 23 ÷ 5 = 4 r 3, so 5 packets will make more than 23 jugs 4 × 5 = 20, for 20 jugs, so 5 packets would be needed - Division with fraction e.g., 23 ÷ 5 = 4 r 3 = $4\frac{3}{5}$; so need 5 packets

DECISION: If **any** "E7" are circled in **Tasks 15, 16** or **17**, CONTINUE the interview.
If **only** "6" are circled, STOP the interview. If in any doubt, CONTINUE the interview.

TASK 18

SAY: One plant is 0.67 metres tall and the other is 0.9 metres tall.
Which one is taller and by how much (in metres)?



Stage	Strategy observed
Early 7	**Cannot solve the problem** or **Uses an earlier numeracy stage** **Misunderstands decimal place value** (Stage 6) **e.g.,** - Ignores the decimal points e.g., 67 – 9 = 58 - Treats numbers after the decimal as whole numbers e.g., 0.9 – 0.67 "=" 0.67 – 0.9 "=" 0.58
7 or higher	**Uses part-whole strategies with decimal place value understanding e.g.,** - Place value partitioning e.g., (0.9 – 0.6) + (0.00 – 0.07) = 0.3 – 0.07 = 0.23 - Making to tenths e.g., 0.67 + 0.03 = 0.7; 0.7 + 0.2 = 0.9; 0.03 + 0.2 = 0.23 - Subtracting in parts e.g., 0.9 – 0.6 = 0.3; 0.3 – 0.07 = 0.23 - Equal addition e.g., 0.9 – 0.67 = 0.93 – 0.7 = 0.23

INTERVIEW 4 TASK 18

One plant is 0.67 metres tall and the other is 0.9 metres tall.

Which one is taller and by how much (in metres)?

INTERVIEW 4 TASK 19

There are 330 children wanting to play rugby. Each team has 15 players.

How many teams will there be?

TASK 19

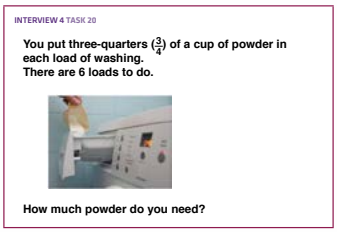
SAY: There are 330 children wanting to play rugby.
Each team has 15 players.
How many teams will there be?

Stage	Strategy observed
Early 7	**Cannot solve the problem** or **Uses an earlier numeracy stage** **Uses a mix of multiplicative and additive strategies** (Stage 6) **e.g.,** 15 + 15 = 30; 30 × 10 = 300; 300 + 30 = 330; 20 + 2 = 22
7 or higher	**Uses multiplicative strategies e.g.,** - Partitioning e.g., 330 ÷ 15 = 330 ÷ (3 × 5); 330 ÷ 3 = 110; 110 ÷ 5 = 22 - Doubling e.g., 330 ÷ 15 = 660 ÷ 30 = 22 - Basic facts with adjustment e.g., 33 ÷ 3 = 11 so 330 ÷ 30 = 11; 11 × 2 = 22 **or** 2 × 15 = 30; 20 × 15 = 300; 20 + 2 = 22

TASK 20

SAY: You put three-quarters of a cup of powder in each load of washing.
There are 6 loads to do.
How much powder do you need?

Note: Say "three-fourths" instead of "three-quarters" if this is more familiar to your student.



Stage	Strategy
Early 7	**Cannot solve the problem** or **Uses an earlier numeracy stage**
7 or higher	**Uses an additive strategy e.g.,** $\frac{3}{4} + \frac{3}{4} = 1\frac{1}{2}$, $1\frac{1}{2} + 1\frac{1}{2} = 3$, $3 + 1\frac{1}{2} = 4\frac{1}{2}$ **Uses a multiplicative strategy e.g.,** $6 \times \frac{3}{4} = (6 \times 3) \div 4 = \frac{18}{4} = 4\frac{1}{2}$ **or** $\frac{1}{4}$ of $6 = \frac{6}{4} = 1\frac{1}{2}$; $1\frac{1}{2} \times 3 = 4\frac{1}{2}$

DECISION: If **any** "7" are circled in **Tasks 18, 19** or **20**, CONTINUE the interview.
If **only** "E7" are circled, STOP the interview. If in any doubt, CONTINUE the interview.

INTERVIEW 4 TASK 20

You put three-quarters ($\frac{3}{4}$) of a cup of powder in each load of washing.
There are 6 loads to do.

How much powder do you need?

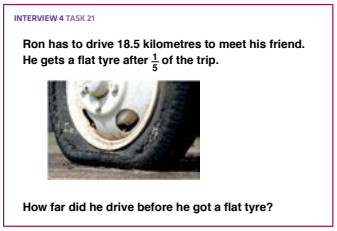
INTERVIEW 4 TASK 21

Ron has to drive 18.5 kilometres to meet his friend.
He gets a flat tyre after $\frac{1}{5}$ of the trip.

How far did he drive before he got a flat tyre?

TASK 21

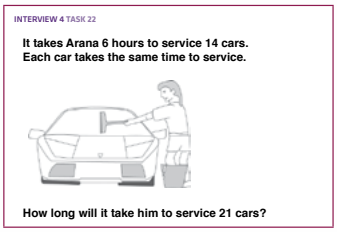
SAY: Ron has to drive 18.5 kilometres to meet his friend.
He gets a flat tyre after one-fifth of the trip.
How far did he drive before he got a flat tyre?



Stage	Strategy observed
7	**Cannot solve the problem** or **Uses an earlier numeracy stage** **Attempts multiplication strategy** (Stage 6) **e.g.,** $5 \times 3 = 15$ and $5 \times 4 = 20$ so the answer is between 3 and 4 (and over 3.5)
Early 8 or higher	**Uses multiplication strategies e.g.,** - Uses decimal equivalent e.g., $\frac{1}{5} = 0.2$; $2 \times 18.5 = 37$ so $0.2 \times 18.5 = 3.7$ - Rounds and compensates e.g., $20 \div 5 = 4$; $1.5 \div 5 = 0.3$ so $18.5 \div 5 = 4 - 0.3 = 3.7$ **or** $18 \div 5 = 3$ r $3 = 3\frac{3}{5} = 3.6$; $\frac{1}{5} \times 0.5 = 0.1$; $3.6 + 0.1 = 3.7$ - Interpolates between known facts e.g., $5 \times 3 = 15$ and $5 \times 4 = 20$; 18.5 is $3.5 \div 5 = \frac{7}{10} =$ 0.7 of the way between 15 and 20, so the answer is 3.7 - Fractional multiplication, e.g., $18.5 = 18\frac{1}{2} = \frac{37}{2}$; $\frac{37}{2} \times \frac{1}{5} = \frac{37}{10} = 3\frac{7}{10}$ (= 3.7) - Doubling and halving, e.g., $18.5 \times 2 = 37$; $\frac{1}{5} \div 2 = \frac{1}{10}$; $37 \times \frac{1}{10} = 3.7$

TASK 22

SAY: It takes Arana 6 hours to service 14 cars.
Each car takes the same time to service.
How long will it take him to service 21 cars?

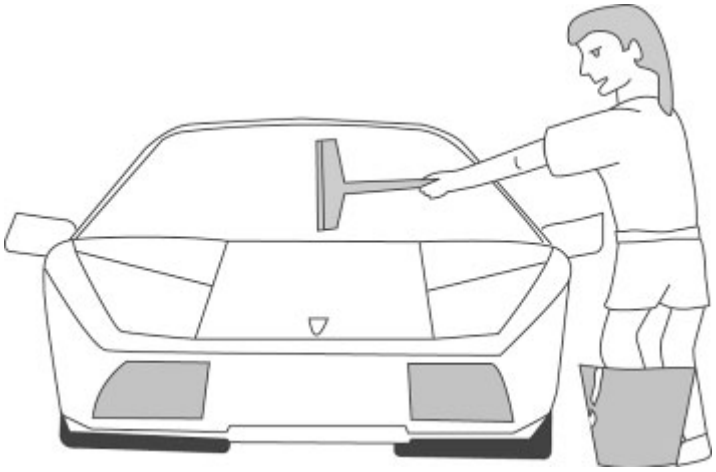


Stage	Strategy observed
7	**Cannot solve the problem** or **Uses an earlier numeracy stage** **Uses inappropriate additive strategy** (Stage 5) **e.g.,** $14 + 7 = 21$; $6 + 7 = 13$ **or** $14 - 8 = 6$; $21 - 8 = 13$ **Uses estimation** (Stage 6/7) **e.g.,** Half of 14 is 7; 6 is less than half of 14; 9 **or** 10 is less than half of 21
Early 8 or higher	**Uses a proportional approach e.g.,** - Multiplicative strategies e.g., $14 \times 1.5 = 21$; $6 \times 1.5 = 9$ - Unitising e.g., 6 cars take 14 hours so 1 car takes $\frac{6}{14}$ hour $= \frac{3}{7}$ hour; $\frac{3}{7}$ of 21 = 9 - Equivalent fractions or ratios e.g., 14:21 = 2:3 = 6:9 so the answer is 9 **or** 6:14 = 3:7 = 6:9 so the answer is 9

Stop the interview

INTERVIEW 4 TASK 22

It takes Arana 6 hours to service 14 cars.
Each car takes the same time to service.



How long will it take him to service 21 cars?