



MINISTRY OF EDUCATION

Te Tāhuhu o te Mātauranga

Gloss

INTERVIEW 2

TASK 1

ACTION: Place 9 counters of the same colour on the table.

SAY: How many counters are there?

Stage	Strategy observed
0	Student cannot count 9 objects
1	Correctly counts the 9 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

INTERVIEW 2 TASK 2

$$2 + 5 = \square$$

SAY: Please hold out your hands for me.

SAY: Here are 2 counters.

SAY: Here are another 5 counters.

SAY: How many counters have you got altogether?

ACTION: Place 2 counters in the student's hand.

ACTION: Place 5 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 23)
4 or higher	Counts on e.g., 3, 4, 5, 6, 7 or 6, 7 Knows $2 + 5$

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 2 TASK 2

$$2 + 5 = \square$$

INTERVIEW 2 TASK 3

$$8 + 6 = \square$$

TASK 3

ACTION: Place 8 counters under a card then place 6 under another card.

SAY: Here are 8 counters, and here are 6 counters.
How many counters are there altogether?

INTERVIEW 2 TASK 3

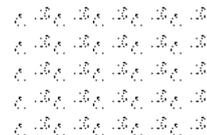
$$8 + 6 =$$

Stage	Strategy observed
3	<p>Cannot solve the problem (After removing the cards – Stage 1)</p> <p>Counts all objects from 1 on materials (Stage 2) e.g., 1, 2, 3, ..., 14</p> <p>Counts all objects from 1 by imaging (Stage 3) e.g., 1, 2, 3, ..., 14</p>
4	<p>Counts on (Stage 4) e.g., 9, 10, 11, 12, 13, 14 or 7, 8, ..., 13, 14</p>
Early 5 or higher	<p>Uses a part-whole strategy e.g.,</p> <ul style="list-style-type: none"> - Making to ten e.g., $8 + 2 = 10$; $10 + 4 = 14$ - Doubling with compensation e.g., $6 + 6 = 12$; $12 + 2 = 14$ or $7 + 7 = 14$ or $8 + 8 = 16$; $16 - 2 = 14$ - Addition fact e.g., $8 + 6 = 14$

TASK 4

INTERVIEW 2 TASK 4

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



How many motorbikes are there altogether?

SAY: There are 5 motorbikes in each row.

SAY: There are 5 rows of motorbikes.

SAY: How many motorbikes are there altogether?

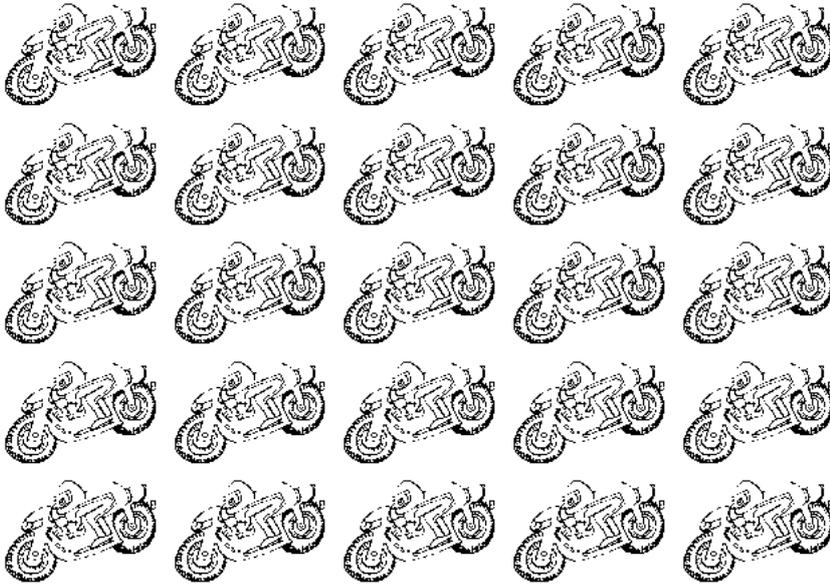
ACTION: Sweep one row with your finger

ACTION: Point to each row one by one

Stage	Strategy observed
3	<p>Cannot solve the problem</p> <p>Counts all objects from 1 on materials (Stage 2) e.g., 1, 2, 3, 4, 5, 6, ..., 25</p> <p>Counts all objects from 1 by imaging (Stage 3) e.g., 1, 2, 3, 4, 5, 6, ..., 25</p>
4	<p>Skip counting (Stage 4) e.g., 5, 10, 15, 20, 25</p>
Early 5 or higher	<p>Uses an additive or multiplicative strategy e.g.,</p> <ul style="list-style-type: none"> - 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., $4 \times 5 = 20$; $20 + 5 = 25$ - Multiplication fact e.g., $5 \times 5 = 25$

INTERVIEW 2 TASK 4

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



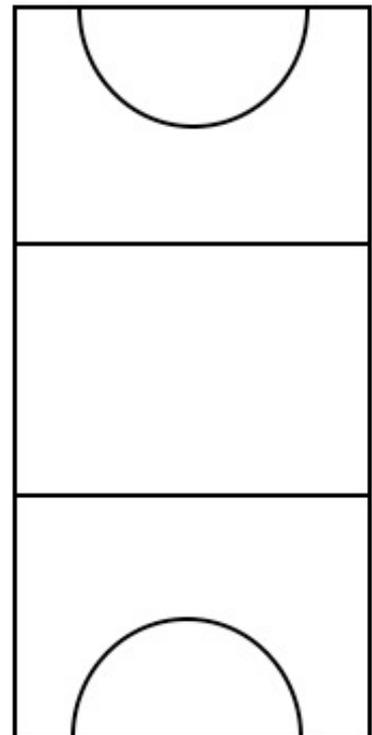
How many motorbikes are there altogether?

INTERVIEW 2 TASK 5

**These 15 players have to spread
out evenly on the court.**



**How many players should be in
each third of the court?**



TASK 5

- ACTION:** Provide 15 counters (players).
Allow the student access to these counters if necessary.
- SAY:** These 15 players have to spread out evenly on the court.
How many players should be in each third of the court?



Stage	Strategy observed
2–4	Cannot solve the problem Equally shares the players, on materials or by imaging (Stage 2–4)
Early 5 or higher	Uses an additive or multiplicative strategy e.g., - Additive partitioning e.g., $5 + 5 = 10$; $5 + 5 + 5 = 15$ - Multiplication or division strategies e.g., $3 \times 4 = 12$; $12 + 3 = 15$ - Multiplication or division fact e.g., $3 \times 5 = 15$ or $15 \div 3 = 5$

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:** I have 84 cards.
I give 7 cards to my friend.
How many cards do I have left?



Stage	Strategy observed
Early 5	Cannot solve the problem or Uses an earlier numeracy stage Counting back (Stage 4) e.g., 83, 82, 81, 80, 79, 78, 77 Mix of counting and part-whole strategies (Stage E5) e.g., $84 - 4 = 80$; 79, 78, 77
5 or higher	Uses a part-whole strategy e.g., - Making to tens e.g., $84 - 4 = 80$; $80 - 3 = 77$ - Take off tidy number and compensates e.g., $84 - 10 = 74$; $74 + 3 = 77$ - Uses doubles e.g., $7 + 7 = 14$ or $14 - 7 = 7$ so $84 - 7 = 77$

INTERVIEW 2 TASK 6

**I have 84 cards.
I give 7 cards to my friend.**



How many cards do I have left?

INTERVIEW 2 TASK 7

**You have 30 balls to put into bags.
Each bag can hold 5 balls.**



How many bags do you need?

TASK 7

SAY: You have 30 balls to put into bags.
Each bag can hold 5 balls.
How many bags do you need?

INTERVIEW 2 TASK 7

You have 30 balls to put into bags.
Each bag can hold 5 balls.



How many bags do you need?

Stage	Strategy observed
Early 5	<p>Cannot solve the problem or Uses an earlier numeracy stage</p> <p>Skip counting (Stage 4) e.g., 5, 10, 15, ..., 30</p> <p>Repeated addition (Stage E5) e.g., $5 + 5 + 5 + \dots + 5 = 30$</p>
5 or higher	<p>Uses an additive or multiplicative strategy e.g.,</p> <ul style="list-style-type: none"> - Additive strategies e.g., $5 + 5 = 10$; $10 + 10 + 10 = 30$; $2 + 2 + 2 = 6$ - Derive from multiplication facts e.g., $4 \times 5 = 20$; $2 \times 5 = 10$; $4 + 2 = 6$ or $5 \times 5 = 25$; $25 + 5 = 30$; $5 + 1 = 6$ - Multiplication or division facts e.g., $6 \times 5 = 30$ or $30 \div 5 = 6$

TASK 8

SAY: The white piece is one-quarter of a strip.
What fraction is the grey piece?

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

INTERVIEW 2 TASK 8

The white piece is one-quarter of a strip.



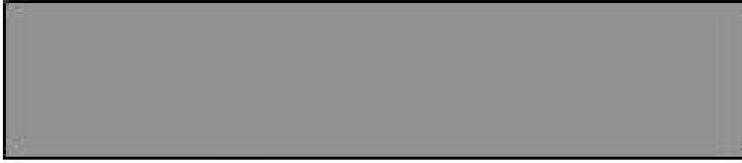
What fraction is the grey piece?

Stage	Strategy observed
Early 5	<p>Cannot solve the problem or Uses an earlier numeracy stage</p> <p>Answer other than three quarters (Stage 3–4)</p> <p>Answer of three quarters without reasonable justification (Stage E5)</p>
5 or higher	<p>Maps one quarter three times and says three quarters e.g., $\frac{1}{4}, \frac{2}{4}, \frac{3}{4}$</p>

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 2 TASK 8

The white piece is one-quarter of a strip.



What fraction is the grey piece?

INTERVIEW 2 TASK 9

**Miriamma scored 476 points on a video game.
Deb scored 123 points on the same game.**



How many more points did Miriamma score than Deb?

TASK 9

SAY: Miriama scored 476 points on a video game.
 Deb scored 123 points on the same game.
 How many more points did Miriama score than Deb?

INTERVIEW 2 TASK 9

Miriama scored 476 points on a video game.
 Deb scored 123 points on the same game.



How many more points did Miriama score than Deb?

Stage	Strategy observed
5	<p>Cannot solve the problem or Uses an earlier numeracy stage</p> <p>Repeat addition or skip counting in hundreds, tens and ones (Stage E5) e.g., [123] 223, 323, 423, 433, 443, ..., 473, 474, 475, 476; $300 + 50 + 3$</p> <p>Mix of counting and part-whole strategies (Stage E5/5) e.g., [123] 223, 323, 423; $423 + 50 + 3 = 300 + 50 + 3 = 353$</p>
Early 6 or higher	<p>Uses a part-whole strategy e.g.,</p> <ul style="list-style-type: none"> - Place value partitioning e.g., $(400 - 100) + (70 - 20) + (6 - 3) = 300 + 50 + 3 = 353$ - Adding on or subtracting in parts e.g., $123 + 300 = 423$; $423 + 50 = 473$; $473 + 3 = 476$; $300 + 50 + 3 = 353$

TASK 10

SAY: A pack of felt pens cost \$8.
 How many packs of felt pens can you buy for \$88?

INTERVIEW 2 TASK 10

A pack of felt pens cost \$8.



How many packs of felt pens can you buy for \$88?

Stage	Strategy observed
5	<p>Cannot solve the problem or Uses an earlier numeracy stage</p> <p>Uses an additive strategy e.g.,</p> <ul style="list-style-type: none"> - Skip counting (Stage 4) e.g., 8, 16, 24, ..., 88 - Repeated addition e.g., (Stage E5) e.g., $8 + 8 + \dots + 8 = 88$ - Doubling additively (Stage 5) e.g., $8 + 8 = 16$; $16 + 16 = 32$; $32 + 32 = 64$; $64 + 16 + 8 = 88$
Early 6 or higher	<p>Uses a multiplicative strategy e.g.,</p> <ul style="list-style-type: none"> - Derives from multiplication facts e.g., $10 \times 8 = 80$; $11 \times 8 = 80 + 8 = 88$ - Multiplication facts e.g., $11 \times 8 = 88$ or $88 \div 8 = 11$

INTERVIEW 2 TASK 10

A pack of felt pens cost \$8.



How many packs of felt pens can you buy for \$88?

INTERVIEW 2 TASK 11



Which is more money:

one-half ($\frac{1}{2}$) of \$20 or one-quarter ($\frac{1}{4}$) of \$40?

TASK 11

SAY: Which is more money:
one-half of \$20 **or** one-quarter of \$40?

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

INTERVIEW 2 TASK 11



Which is more money:
one-half ($\frac{1}{2}$) of \$20 or one-quarter ($\frac{1}{4}$) of \$40?

Stage	Strategy observed
5	<p>Cannot solve the problem or Uses an earlier numeracy stage</p> <p>Gets both unit fractions from addition facts (Stage E5) e.g., $10 + 10 + 10 + 10 = 40$ so $\frac{1}{4}$ of 40 is 10 and $10 + 10 = 20$ so $\frac{1}{2}$ of 20 is 10</p>
Early 6 or higher	<p>Uses multiplication or division facts e.g., $\frac{1}{4}$ of 40 is 10 because $10 \times 4 = 40$ or $40 \div 4 = 10$ and $\frac{1}{2}$ of 20 is 10 because $10 \times 2 = 20$ or $20 \div 2 = 10$</p>

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: Leena counted 82 penguins on the beach.
Later there were only 44.
How many penguins had left the beach?

INTERVIEW 2 TASK 12

Leena counted 82 penguins on the beach.
Later there were only 44.

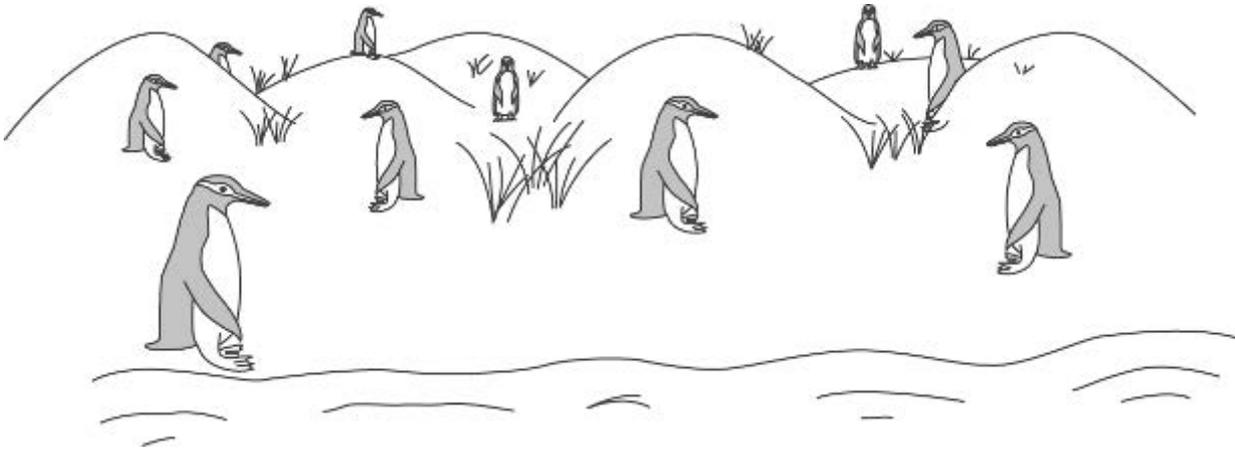


How many penguins had left the beach?

Stage	Strategy observed
Early 6	<p>Cannot solve the problem or Uses an earlier numeracy stage</p> <p>Mix of counting and part-whole strategies (Stage E5) e.g., $[82] 72, 62, 52; 52 - 2 = 50; 50 - 6 = 44; 30 + 2 + 6$</p> <p>Attempts part-whole strategy with error (Stage 5) e.g., $82 - 50 = 32; 32 - 6 = 26$ (compensates in the wrong direction)</p>
6 or higher	<p>Uses a part-whole strategy e.g.,</p> <ul style="list-style-type: none"> - Place value partitioning e.g., $(80 - 40) + (2 - 4) = 40 - 2 = 38$ - Making to tens e.g., $82 - 2 = 80; 80 - 30 = 50; 50 - 6 = 44; 2 + 30 + 6 = 38$ or $44 + 6 = 50; 50 + 30 = 80; 80 + 2 = 82; 6 + 30 + 2 = 38$ - Rounding and compensation e.g., $82 - 40 = 42; 42 - 4 = 38$ - Equal additions e.g., $82 - 44 = 88 - 50 = 38$

INTERVIEW 2 TASK 12

**Leeana counted 82 penguins on the beach.
Later there were only 44.**



How many penguins had left the beach?

INTERVIEW 2 TASK 13

**Tom has 8 times as many stickers as Sarah.
Tom has 72 stickers.**



How many stickers does Sarah have?

TASK 13

SAY: Tom has 8 times as many stickers as Sarah.
Tom has 72 stickers.
How many stickers does Sarah have?

INTERVIEW 2 TASK 13

Tom has 8 times as many stickers as Sarah.
Tom has 72 stickers.



How many stickers does Sarah have?

Stage	Strategy observed
Early 6	<p>Cannot solve the problem or Uses an earlier numeracy stage</p> <p>Adding strategies e.g.,</p> <ul style="list-style-type: none"> - Doubling additively (Stage 5) e.g., $8 + 8 = 16$; $16 + 16 = 32$; $32 + 32 = 64$; $64 + 8 = 72$; $8 + 1 = 9$
6 or higher	<p>Uses a multiplicative strategy e.g.,</p> <ul style="list-style-type: none"> - Derived from a known fact e.g., $8 \times 10 = 80$; $80 - 8 = 72$; $10 - 1 = 9$ - Multiplication fact e.g., $8 \times 9 = 72$ or $72 \div 8 = 9$

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?

INTERVIEW 2 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?

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

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 2 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 2 TASK 15



The world record for men's shot put is 23.12 metres.

The world record for women is 22.63 metres.

What is the difference in metres between the two records?

TASK 15

SAY: The world record for men's shot put is 23.12 metres.
The world record for women is 22.63 metres.
What is the difference in metres between the two records?

INTERVIEW 2 TASK 15



The world record for men's shot put is 23.12 metres.
The world record for women is 22.63 metres.

What is the difference in metres between the two records?

Stage	Strategy observed
6	<p>Cannot solve the problem or Uses an earlier numeracy stage</p> <p>Subtraction misconception (Stage 5) e.g.,</p> <ul style="list-style-type: none"> - Subtracts the whole number then subtracts the smaller decimal from the larger e.g., $23 - 22 = 1$; $0.63 - 0.12 = 0.51$ so the answer is 1.51
Early 7 or higher	<p>Uses part-whole strategies with decimal place value understanding e.g.,</p> <ul style="list-style-type: none"> - Place value partitioning e.g., $(23 - 22) + (0.1 - 0.6) + (0.02 - 0.03) = 1 - 0.5 - 0.01 = 0.49$ - Making to ones e.g., $22.63 + 0.37 = 23$; $23 + 0.12 = 23.12$; $0.37 + 0.12 = 0.49$ - Rounding and compensation e.g., $22.63 + 0.5 = 23.13$; $23.13 - 0.01 = 23.12$; $0.5 - 0.01 = 0.49$ - Equal addition e.g., $(23.12 + 0.37) - (22.63 + 0.37) = 23.49 - 23.00 = 0.49$

TASK 16

SAY: I have 6 boxes filled with books.
Each box has 36 books.
How many books are there altogether?

INTERVIEW 2 TASK 16

I have 6 boxes filled with books.
Each box has 36 books.



How many books are there altogether?

Stage	Strategy observed
6	<p>Cannot solve the problem or Uses an earlier numeracy stage</p> <p>Uses additive strategies (Stage 5) e.g.,</p> <ul style="list-style-type: none"> - Doubling additively e.g., $36 + 36 = 72$; $72 + 72 = 144$; $144 + 72 = 216$ <p>Uses a mix of multiplicative and additive strategies (Stage 6) e.g.,</p> <ul style="list-style-type: none"> $6 \times 10 = 60$; $60 + 60 + 60 = 180$; $6 \times 6 = 36$; $180 + 36 = 216$
Early 7 or higher	<p>Uses a multiplicative strategy e.g.,</p> <ul style="list-style-type: none"> - Place value partitioning with basic facts e.g., $(6 \times 30) + (6 \times 6) = 180 + 36 = 216$ - Rounding and compensation e.g., $(6 \times 40) - (6 \times 4) = 240 - 24 = 216$ - Doubling and halving e.g., $6 \times 36 = 3 \times 72 = 216$

INTERVIEW 2 TASK 16

**I have 6 boxes filled with books.
Each box has 36 books.**



How many books are there altogether?

INTERVIEW 2 TASK 17

**There are 24 students in the class.
Three-eighths ($\frac{3}{8}$) of them are boys.**



How many boys are in the class?

TASK 17

SAY: There are 24 students in the class.
Three-eighths of them are boys.
How many boys are in the class?

INTERVIEW 2 TASK 17

There are 24 students in the class.
Three-eighths ($\frac{3}{8}$) of them are boys.



How many boys are in the class?

Stage	Strategy observed
6	<p>Cannot solve the problem or Uses an earlier numeracy stage</p> <p>Uses additive strategies (Stage 5) e.g., $\frac{1}{8}$ of 24 is 3 because $3 + 3 + 3 + \dots + 3 = 24$; $\frac{3}{8}$ of 24 = $3 + 3 + 3 = 9$</p>
Early 7 or higher	<p>Uses a multiplicative strategy e.g., $\frac{1}{8}$ of 24 is 3 because $8 \times 3 = 24$ or $24 \div 3 = 24$ then multiplies (or adds) to get $\frac{3}{8}$ i.e., $3 \times 3 = 9$ [or $3 + 3 + 3 = 9$]</p> <p>Obtains from a known fraction e.g., $\frac{4}{8}$ of 24 = 12; $\frac{3}{8}$ of 24 = $12 - 3 = 9$</p>

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: On a hot day the tomato plants used 1.5 litres of water.
On a cold day they used 0.885 litres.
How much more water did the plants use on the hot day than the cold day?

INTERVIEW 2 TASK 18

On a hot day the tomato plants used 1.5 litres of water.
On a cold day they used 0.885 litres.



How much more water did the plants use on the hot day than the cold day?

Stage	Strategy observed
Early 7	<p>Cannot solve the problem or Uses an earlier numeracy stage</p> <p>Misinterprets or ignores decimal place value (Stage 6) e.g., $1.5 - 0.885 = 1 + (0.5 - 0.885)$ “=” $1 - 0.88 = 0.12$</p>
7 or higher	<p>Uses part-whole strategies e.g.,</p> <ul style="list-style-type: none"> - Place value partitioning e.g., $(1 - 0) + (0.5 - 0.885) = 1 - 0.385 = 0.615$ - Other partitioning e.g., $1.5 - 0.885 = 0.5 + (1 - 0.885) = 0.5 + 0.115 = 0.615$ - Making to tenths and ones e.g., $0.885 + 0.015 = 0.9$; $0.9 + 0.1 = 1$; $0.015 + 0.1 + 0.5 = 0.615$ - Rounding and compensation e.g., $1.5 - 0.9 = 0.6$; $0.6 + 0.015 = 0.615$

INTERVIEW 2 TASK 18

**On a hot day the tomato plants used 1.5 litres of water.
On a cold day they used 0.885 litres.**



How much more water did the plants use on the hot day than the cold day?

INTERVIEW 2 TASK 19

**There are 12 eggs in a dozen.
Jess needs 180 eggs.**



How many dozens does Jess need?

TASK 19

SAY: There are 12 eggs in a dozen.
Jess needs 180 eggs.
How many dozens does Jess need?

INTERVIEW 2 TASK 19
There are 12 eggs in a dozen.
Jess needs 180 eggs.



How many dozens does Jess need?

Stage	Strategy observed
Early 7	<p>Cannot solve the problem or Uses an earlier numeracy stage</p> <p>Uses a mix of additive and multiplicative strategies (Stage 6) e.g., $10 \times 12 = 120$; $120 + 12 + 12 + 12 + 12 + 12 = 180$ or $12 + 12 + 12 + 12 + 12 = 60$; $60 \times 3 = 180$; $5 \times 3 = 15$</p>
7 or higher	<p>Uses multiplicative strategies e.g.,</p> <ul style="list-style-type: none"> - Derive from basic facts with adjustment e.g., $12 \times 10 = 120$; $12 \times 5 = 60$ - Successive halving e.g., $180 \div 12 = 90 \div 6 = 45 \div 3 = 15$ or $180 \div 6 = 30$ so $180 \div 12 = 15$ <p>Uses proportional strategies e.g.,</p> <ul style="list-style-type: none"> - Proportionality e.g., $10 \times 12 = 120$; $\frac{1}{2} \times 120 = 60$; $120 + 60 = 180$; $\frac{1}{2} \times 10 = 5$; $10 + 5 = 15$ or 180 is half way between 120 ($= 10 \times 12$) and 240 ($= 20 \times 12$); and 15 is half way between 10 and 20 so the answer is 15

TASK 20

SAY: In a big lolly packet there are 24 reds and 16 blacks.
A smaller packet with the same mix has a total of 10 lollies.
How many black lollies are in that packet?

INTERVIEW 2 TASK 20

In a big lolly packet there are 24 reds and 16 blacks.
A smaller packet with the same mix has a total of 10 lollies.



How many black lollies are in that packet?

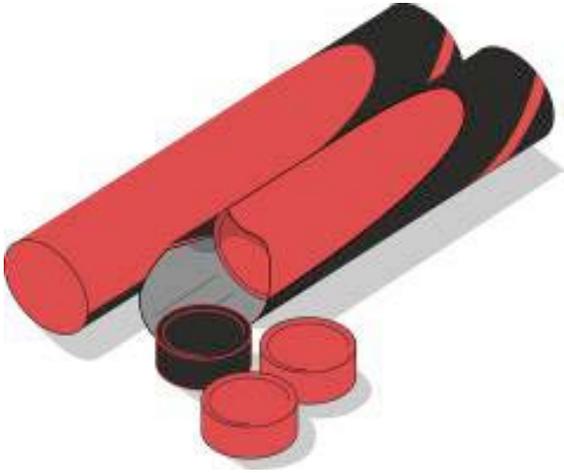
Stage	Strategy observed
Early 7	<p>Cannot solve the problem or Uses an earlier numeracy stage</p> <p>Uses proportions inappropriately (Stage 6) e.g., $24 = 1.5 \times 16$, so the answer is $10 \times 1.5 = 15$ or $16 + \frac{1}{2}$ of 16 = 24; $10 + \frac{1}{2}$ of 10 = 15</p>
7 or higher	<p>Evaluates the whole and then partitions it proportionally e.g., $16 \div (24 + 16) = \frac{16}{40} = \frac{2}{5}$; $\frac{2}{5}$ of 10 = 4 or $16:(24 + 16) = 16:40 = 4:10$ so the answer is 4 or $24:16$ is 40 in total; 40 in total is four times 10; $24:16 = (24 \div 4):(16 \div 4)$ $= 6:4$ so the answer is 4</p>

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 2 TASK 20

In a big lolly packet there are 24 reds and 16 blacks.

A smaller packet with the same mix has a total of 10 lollies.



How many black lollies are in that packet?

INTERVIEW 2 TASK 21

Each netball bib takes 0.38 metres of cloth to make. You have 9.6 metres of cloth.



Is that enough cloth to make 25 bibs?

TASK 21

SAY: Each netball bib takes 0.38 metres of cloth to make.
You have 9.6 metres of cloth.
Is that enough cloth to make 25 bibs?

INTERVIEW 2 TASK 21

Each netball bib takes 0.38 metres of cloth to make.
You have 9.6 metres of cloth.



Is that enough cloth to make 25 bibs?

Stage	Strategy observed
7	<p>Cannot solve the problem or Uses an earlier numeracy stage</p> <p>Attempts multiplication strategy e.g., $25 \times 0.4 = 10$</p>
Early 8 or higher	<p>Uses multiplication strategies e.g.,</p> <ul style="list-style-type: none"> - Doubling e.g., $0.38 \times 20 = 7.6$; $\frac{1}{2}$ of 3.8 = 1.9; $7.6 + 1.9 = 9.5$; so 9.5m can make 25 or $0.38 \times 20 = 7.6$; $9.6 - 7.6 = 2$; $2 \div 0.4 = 5$ (and 0.4 is more than 0.38) - Facts of 25 e.g., $25 \times 3 = 75$ so $25 \times 0.3 = 7.5$; $25 \times 0.08 = 2$; so $25 \times 0.38 = 7.5 + 2 = 9.5$ or $38 \times 100 = 38$ metres; $25 = \frac{1}{4} \times 100$; $\frac{1}{4} \times 38 = \frac{1}{4} \times 36 + \frac{1}{4} \times 2 = 9 + 0.5 = 9.5$ so 9.5m enough to make 25 bibs.

TASK 22

SAY: To make 8 aprons, it takes 6 metres of cloth.
How many metres would you need to make 20 aprons?

INTERVIEW 2 TASK 22

To make 8 aprons, it takes 6 metres of cloth.



How many metres would you need to make 20 aprons?

Stage	Strategy observed
7	<p>Cannot solve the problem or Uses an earlier numeracy stage</p> <p>Uses inappropriate additive strategy (Stage 5) e.g., $8 + 12 = 20$; $6 + 12 = 18$ or $8 - 6 = 2$; $20 - 2 = 18$</p> <p>Uses estimation (Stage 6/7) e.g., Less than 1 metre to make 1 apron so about 15 or 16 metres</p>
Early 8 or higher	<p>Uses a proportional approach e.g.,</p> <ul style="list-style-type: none"> - Multiplicative strategies e.g., $8 \times 2.5 = 20$; $6 \times 2.5 = 15$ - Unitising e.g., 8 aprons take 6 metres so 1 apron takes $\frac{6}{8}$ metre = $\frac{3}{4}$ metre; $\frac{3}{4}$ of 20 = 15 - Equivalent fractions or ratios e.g., $20:8 = 10:4 = 5:2 = 15:6$ so the answer is 15

Stop the interview

INTERVIEW 2 TASK 22

To make 8 aprons, it takes 6 metres of cloth.



How many metres would you need to make 20 aprons?