Ordered strictly alphabetically

p2 FDPRproblemNC,

p2 proportionalFormulaNC,

p3 proportionalPairsNC,

p4 secretADDnSUB,

p4 secretADDsign,

p5 secretDIVsign,

p5 secretMULTIsigns,

p5 secretSUBsign,

p6 secretXsign,

FDPRproblemNC

8. final amount after e.g 20% increase or decrease of £250
7. e.g 20% of £250
6. fraction of NOT
5. e.g. $\frac{3}{5}$ of 350
4. e.g $\frac{1}{5}$ of 150
3. e.g. $\frac{1}{5}$ of 15 {sharing into boxes is a good enough method and need to divide T0 by 10}
2. e.g. Half of TO {both even digits}

proportionalFormulaNC

7. solve a proportional formula problem {speed and density without formula, others given formula}
6. **scaffold to** "make {letter} the subject?? of proportional formula **scaffold is** given blank formula triangle
5. **scaffold to** solve a proportional formula problem e.g. F = ma {either multiply or divide} **scaffold is** given 2 formula triangles (one with formula, one blank)
4. **scaffold to** solve a proportional formula problem e.g. F = ma {only divide} **scaffold is** given 2 formula triangles (one with formula, one blank)
3. **scaffold to** solve a proportional formula problem e.g. F = ma {only multiply}**scaffold is** given 2 formula triangles (one with formula, one blank)
2. **scaffold to** write 4 similar but different times tables facts **scaffold is** proportional triangle e.g. $5 = \frac{40}{\ldots}$ and incomplete 5 row of times table grid
1. **scaffold to** write 4 similar but different times tables facts **scaffold is** proportional triangle e.g. $5 = \frac{40}{8}$

proportionalPairsNC

11. does doubling e.g. term 3 in a sequence give term 6? (encourage to use proportionality)

10. solve a proportional pairs question e.g. ingredients or best value or equivalent fraction or scale diagram $\times 2$ or $\times 3$ or $\times 0.5$ or $\times 1.5$ or $\times 2.5$

9. **scaffold to** solve a proportional pairs question e.g. ingredients or scale diagram or percentage or pie chart **scaffold is** a labelled proportional line (with hints to $\times 2$ and $\times 3$ and $\div 2$) **only** $\times 1.5$ or $\times 2.5$

8. **scaffold to** solve a proportional pairs question e.g. ingredients or equivalent fraction or change units or pie chart or mix paint **scaffold is** a labelled proportional line (with scale diagram a pair marked on line) **only** $\div 2$ or $\div 10$ or easy $\div 4$

7. solve a proportional pairs question e.g. ingredients or best value or scale diagram or percentage **only** $\times 2$ or $\times 10$ or easy $\times 4$ or $\times 5$ or $\times 20$

6. **scaffold to** solve a proportional pairs question e.g. ingredients or scale diagram or fraction to percentage **scaffold is** a labelled proportional line (with scale diagram a pair marked on line) **only** easy $\times 4$ or $\times 5$ or $\times 20$

5. **scaffold to** solve a proportional pairs question e.g. ingredients or change units or scale diagram or fraction to percentage **scaffold is** a pair of values shown on double sided and labelled proportional line (only $\times 2$ or $\times 10$ required)

4. **scaffold to** solve a proportional pairs question e.g. ingredients or best value or equivalent fraction or percentage or scale on map **scaffold is** given double sided and labelled proportional line with 3 of the numbers and blank scale factors (if harder than $\times 2$ or $\times 10$ also given useful rows of times table grid)

3. **scaffold to** find missing number from 2 proportional pairs **scaffold is** given useful row of the times table grid to fill in both scale factors (the easier one is always $\times 2$ or $\times 10$)

2. **scaffold to** find missing number from 2 proportional pairs **scaffold is** given horizontal and vertical scale factors (the easier one always is $\times 2$ or $\times 10$)

1. **scaffold to** e.g. recipe for 4 people needs 120g of ingredient X, how much for 8 people **scaffold is** shows doubling

secretADDnSUB

5. Complete table of profit/loss or goal difference etc
4. Given a list of 3 to 5 items (up to 3 of the same) to buy and prices for all **except one thing, where 2 to 4 of this thing are bought**, amount tendered and change: work out the missing price for one of the thing
3. Add and subtract a few items e.g. passengers getting on and off a bus at a few stops
2. Given a list of 3 to 5 items (up to 3 of the same) to buy and prices for all **except one** and amount tendered and change: work out the missing price
1. Given a list of 3 to 5 items to buy and prices for all (up to 4 of the same) AND amount tendered: work out the change

secretADDsign

11. decide is there enough/too much/too high/too heavy etc {money/weight etc}
10. total cost of 2 items {given in pounds}
9. how many altogether? {TO + TO, tens and ones carry}
8. how many altogether? {TO + TO, tens carry}
7. how many altogether? {TO + TO, ones carry}
6. how many altogether? {TO + TO, no carry}
5. how many altogether? {TO + O, carry}
4. how many altogether? {TO + O, no carry}
3. how many altogether? {teen + ones}
2. how many altogether? {ONES + ones}
1. **scaffold to** how many altogether?{ONES + ones} **scaffold is** pictures**scaffold is** pictures

secretDIVsign

11. word problem: divide byTO, answer has a remainder. Sensible answer w.r.t. context
10. word problem: divide by TO with TO answer
9. word problem: divide by O, answer O and a remainder. Sensible answer w.r.t. context
8. word problem: divide by O answer is TO e.g. 78
7. word problem: divide by O answer is 1O e.g. 17 or 12
6. word problem: divide by {3, 4, 6, 7, 8} answer is O
5. word problem: divide by {5, 9} answer is O
4. word problem: divide by {2, 10} answer is O
2. recognise the meaning of divide and share in word problems e.g.3 friends have 21 marbles, they share the marbles equally. How many marbles do they each get? (no boxes)
1. **scaffold to** recognise the meaning of share in word problems **scaffold is** correct number of boxes

secretMULTIsigns

8. word problem which needs TO × {TO or HTO}, and a change of unit
7. word problem estimate {× only } state whether over or under estimate
6. word problem which needs O × {TO or HTO} and another operation
2. decide which deal is cheapest where TOLD how much want to buy e.g. chairs and tables OR just chairs
1. decide which deal is cheapest between BOGOF or B2GOF or buy one get one half price

secretSUBsign

11. find cost given amount tendered and change
10. find change given cost and amount tendered
9. how many more/left {To - O i.e. borrow}
8. how many more/left {TO - o i.e. no borrow}
7. how many left after e.g. eaten, given away, sold etc {To - tO i.e. borrow}
6. how many more {To - tO i.e. borrow}
5. how many left after e.g. eaten, given away, sold etc {TO - to i.e. no borrow}
4. how many more {TO - to i.e. no borrow}
3. how many left after e.g. eaten, given away, sold etc {ONES - ones}
2. how many more {ONES - ones}
1. **scaffold to** how much more {ONES - ones} **scaffold is** pictures of ONES things above and ones things below

secretXsign

13. word problem: HTO × TO in non money context e.g. weight or volume
12. word problem: TO × £ e.g 34 × £6.73
11. estimate word problem: e.g. price of petrol and number of litres
10. word problem: TO × £ e.g 34 × £6.70
9. is there enough? e.g. party food {needs 2 multiply calculations and comparison}
8. word problem: TO × TO e.g. 84 × 37
7. word problem: e.g 84 × 7 pence, give answer in pounds
6. word problem: TO × O e.g. 84 × 6
5. word problem: teen × O e.g. 14 × 7
4. word problem: {3, 4, 6, 7 or 8} × O
3. word problem: {5 or 9} × O
2. word problem: {2 or 10} × O