

| Strategy | Mixed strategies | What the teacher says | Book 13 | Book 14 | Book 15 | Book 16 | Book 17 | Book 18 | Book 19 | Book 20 | Book 21 | Book 22 | Book 23 | Book 24 |
|----------|--|---|----------|--|--|---------|---------|---------|---------|-------------------------------|---------------|-----------------------|----------|---------|
| | | | 1 | Don't worry about the zero Don't worry about the zeroes | Revision questions Revision questions Dan finds adding numbers ending in zero easy. He doesn't worry about the zeroes. Adela does not worry about the zeroes. Sindi does not worry about the zeroes until the end. Dan does not worry about the zero until the end of the calculation. Dan says he can use the same strategy to calculate $2\,500 \div 5$. Dan does not worry about the zero until after he multiplied 8 by 3. Don't worry about the zeroes', Doubling Adila doubles 30 by not worrying about the zero until after she has doubled 3. Dan doesn't worry about the zero in 20 until after he has doubled 2. Vusi halves 140 by not worrying about the zero until after he has halved 14. Don't worry about the zero and compensate Revision questions | | 29 | 29 | 44 | | | 3, 7, 46 | 3 | |
| 2 | Breaking up | Revision questions Vusi breaks up 129 into 120 and 9 to make it easier to divide by 3. Vusi breaks up one of the numbers to make adding easier. Adila breaks up one number to add the numbers. Vusi uses a breaking up strategy to make multiplication easier. Sindi uses a breaking up strategy. Dan breaks up the number to make dividing easier. Vusi thinks about the number he is dividing by and decides on the best way to break up the number. Abdul thinks about the number he is dividing by to decide how to break up the number that he is dividing. Sindi breaks up 492 into parts that are easy to divide by 6. Abdul breaks up the number. Xolile breaks up the number into numbers that are multiples of the divisor. Abdul is using a breaking up strategy to calculate 50%. Xolile breaks 15% up into 10% plus 5% to make calculating easier. Breaking up and adding the parts Adila breaks up one of the numbers and then adds the parts. Sindi breaks up one of the numbers and adds the parts. Child: I break up the second number only and then add. Child: I break up both numbers and add the parts. Breaking up and doubling Vusi doubles 360 by breaking it up into $300 + 60$. Vusi doubles 46 by breaking it up into $40 + 6$. Vusi doubles 47 by breaking it up into $40 + 7$ and doubling each part. Abdul breaks up one fraction in such a way that he can combine fractions to make a whole. Breaking up fractions to make a whole Sindi breaks up the numbers and adds from left to right. Dan breaks up both numbers and adds from left to right. I break up all the numbers. (child) I break up two of the numbers. (child) Breaking up and subtracting the parts Sindi subtracts by taking away the parts. Revision questions Dan subtracts by taking away the parts. Breaking up the smaller number, and subtracting the parts. Zoliswa breaks up the smaller number and subtracts the parts. I break up the smaller number. (child) Breaking up, subtracting from left to right. Sally breaks up the numbers and subtracts from left to right. Breaking up into factors, and pairing strategies Dan breaks up both numbers into their factors and then chooses pairs that are easy to multiply. Breaking up, multiplying by 10 and compensating strategies Sindi breaks up 11 so that she can multiply by 10 and then compensate. [Breaking up] and multiplying the parts Sally multiplies the parts [Breaking up] and multiplying the parts Xolile uses his knowledge of common fractions to calculate with decimals. | 48 | | | 44 | 30 | | 46 | 3, 8, 14, 25, 38 | 24, 46 | | 28 | 47 |
| | Breaking up [%] | Abdul is using a breaking up strategy to calculate 50%. Xolile breaks 15% up into 10% plus 5% to make calculating easier. | | | | | 1 8 | | 38 | | | | 41 38 | |
| | Breaking up and adding the parts | Adila breaks up one of the numbers and then adds the parts. Sindi breaks up one of the numbers and adds the parts. Child: I break up the second number only and then add. Child: I break up both numbers and add the parts. | 26 15 | | | | | | | 16, 8 12, 16 8 12, 8 | | | | |
| | Breaking up and doubling | Vusi doubles 360 by breaking it up into $300 + 60$. Vusi doubles 46 by breaking it up into $40 + 6$. Vusi doubles 47 by breaking it up into $40 + 7$ and doubling each part. | 35 7 | | 11 | | | | | | | | | |
| | Breaking up fractions to make a whole | Abdul breaks up one fraction in such a way that he can combine fractions to make a whole. | | | | | | | | | 40, 44 | | | |
| | Breaking up and adding from left to right | Sindi breaks up the numbers and adds from left to right. Dan breaks up both numbers and adds from left to right. I break up all the numbers. (child) I break up two of the numbers. (child) | 40 | | | | 12, 17 | | | | 3 12 12 | | | |
| | Breaking up and subtracting the parts | Sindi subtracts by taking away the parts. Revision questions Dan subtracts by taking away the parts. | | 27 29, 47 35 | | | | | | | | | | |
| | Breaking up the smaller number, and subtracting the parts. | Zoliswa breaks up the smaller number and subtracts the parts. I break up the smaller number. (child) | | | | | | 37 | | | | 10, 14, 18, 30, 47 | | |
| | Breaking up, subtracting from left to right. | Sally breaks up the numbers and subtracts from left to right. | | | | | | | | | | 10, 14, 18, 30, 47 | | |
| | Breaking up into factors, and pairing strategies | Dan breaks up both numbers into their factors and then chooses pairs that are easy to multiply. | | | | | | | 33, 46 | 3 | | | | |
| | Breaking up, multiplying by 10 and compensating strategies | Sindi breaks up 11 so that she can multiply by 10 and then compensate. | | | | | | | 41 | | | | | |
| | [Breaking up] and multiplying the parts | Sally multiplies the parts | | | | | | | | | | | 6 | |
| | [Breaking up] and multiplying the parts | Xolile uses his knowledge of common fractions to calculate with decimals. | | | | | | | | | | | 10 | |

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|------------------------------|--|---|--|---|---------|---------|---------|------------|---------|---------|---------|---------|-------------|-------------|--|
| | | | | | | | | | | | | | | | |
| 3 Doubling | | Revision questions | 22, 48 | | 29 | 27 | | | | | | | | | |
| | | I used my doubling strategy (child) | 7 | | | | | | | | | | | | |
| | | Don't worry about the zeroes', 'Doubling' | 3 | | | | | | | | | | | | |
| | | Adila doubles 30 by not worrying about the zero until after she has doubled 3. | | | 7 | | | | | | | | | | |
| | | Sindi doubles 40 by not worrying about the zero until after she has doubled 4. | | | | | | | | | | | | | |
| Breaking up and doubling | | Vusi doubles 360 by breaking it up into 300 + 60. | 35 | | | | | | | | | | | | |
| | | Sindi uses a doubling strategy to multiply by 8. | | | 19 | | | | | | | | | | |
| | | Revision questions | | | 29 | | | | | | | | | | |
| | | Doubling and halving | | | | | | | 16, 46 | 3 | | | | | |
| | | Vusi uses a doubling and halving strategy to make 48 in different ways. | | | | | | | 20 | | | | | | |
| 4 Doubling twice | | Sindi uses a doubling and halving strategy to make it easier to multiply. | | | | | | | 20 | | | | | | |
| | | Sindi uses a doubling and halving strategy more than once. | | | | | | | 20 | | | | | | |
| | | Revision questions | | | | | | | 46 | | | | | | |
| | | Revision questions | | | 29 | | | | | | | | | | |
| | | Adila multiplies by 4 by doubling twice. | | | 15 | | | | | | | | | | |
| 5 Halving | | Revision questions | | | | | | | | | | | 38 | | |
| | | Adila uses a halving strategy to divide by 4. | | | | | | | | | | | 11 | | |
| | | To multiply by 5, Vusi actually multiplies by 10 and halves his answer. | | | 31 | | | | | | | | | | |
| | | To multiply by 50 Adila actually multiplies by 100 and halves the answer. | | | 35 | | | | | | | | | | |
| | | Revision questions | | | 47 | | | | | | | | | | |
| | | Revision questions | | | 47 | | | | | | | | | | |
| | | Vusi uses a doubling and halving strategy to make 48 in different ways. | | | | | | | 16 | | | | | | |
| | | Sindi uses a doubling and halving strategy to make it easier to multiply. | | | | | | | 20 | | | | | | |
| | | Sindi uses a doubling and halving strategy more than once. | | | | | | | 20 | | | | | | |
| | | "Halving and doubling" [%] | | | | | | | 46 | | | | | 38 | |
| 6 Pairing | | Revision questions | | | | 18 | | | | | | | | | |
| | | Vusi halves 140 by not worrying about the zero until after he has halved 14. | | | | | | | 46 | 3,17 | | | | | |
| | | Dan pairs the numbers to make calculating easier. | 48 | | | | 47 | | | | | | | | |
| | | Sindi/Adila looks for pairs that are easy to add. | 30 | | | | 33, 36 | | | | | | | | |
| | | Vusi uses a pairing strategy to make adding easier. | | | | | 44 | | | | | | | | |
| | | Adila chooses pairs of numbers that are easy to work with. | | | | | | | 24 | | | | | | |
| | | Adila makes her own pair of numbers to make adding easier. | | | | | 40 | | | | | | | | |
| | | I made my own pairs. (child) | | | | | | 17 | | | | | | | |
| | | Dan breaks up both numbers into their factors and then chooses pairs that are easy to multiply. | | | | | | | | 33 | 3 | | | | |
| | | Revision questions | | | | | | | 33 | 3 | | | | | |
| 7 Completing the tens | Completing the tens and counting on | Revision questions | 48 | 3, 29 | | | | | | | | | | | |
| | | Adila first completes the tens. | 44 | | | | | | | | | | | | |
| 8 Counting on | Counting on or counting back Completing the tens and counting on Counting on | Revision questions | | 29, 47 | | | | | | | | | | | |
| | | Revision questions | | 29 | | | | | | | | | | | |
| | | I just count on in hundreds (child)/ I can do that by counting on.(child) | | 12, 19 | | | | | | | | | | | |
| | | Sindi first completes the tens and then counts on | | 15 | | | | | | | | | | | |
| 9 Counting back | Counting on or counting back Counting back | I counted on. (child) | | | | | | 12, 17, 37 | | | | | | | |
| | | Revision questions | | 29, 47 | | | | | | | | | | | |
| | | I count back from 800 (child)/ I can do that by counting back.(child) | | 12, 19 | | | | 37 | | | | | | | |
| 10 Addition facts | | I worked backwards. (child) | | | | | | 12, 37 | | | | | | | |
| | | Revision questions | | 29 | | | | | | | | | | | |
| 11 Adding the parts | Breaking up and adding the parts | Sindi uses her addition facts to help her with subtraction | | 7 | | | | | | | | | | | |
| | | Adila breaks up one of the numbers and then adds the parts. | 26 | | | | | | | | 16 | | | | |
| | | I break up the second number only and then add.(child) | | | | | | | | | 8 | | | | |
| 12 Adding more | Multiplying by 10 and adding more | I break up both numbers and add the parts. (child) | | | | | | | | 8 | | | | | |
| | | Revision questions | | | 47 | | | | | | | | | | |
| 13 Adding from left to right | Breaking up and adding from left to right | Sindi breaks up the numbers and adds from left to right. | 40 | | | | | | | | | 3 | | | |
| | | Dan breaks up both numbers and adds from left to right. | | | | | 12, 17 | | | | | 12 | | | |
| 14 Subtracting the parts | Breaking up and subtracting the parts | Revision questions | | 27 | | | | | | | | | | | |
| | | Revision questions | | 29, 47 | | | | | | | | | | | |
| | | I subtracted the parts (child) | | | | | | 12, 17 | | | | | | | |
| | | Dan subtracts by taking away the parts. | | 35 | | | | | | | | | | | |
| | | Sindi calculates the answer by subtracting the parts. | | | | | | | 20, 23 | | | | 34 | | |
| | | Zoliswa breaks up the smaller number and subtracts the parts. | | | | | | | | | | | 10, 14, 18, | | |
| | | I break up the smaller number. (child) | | | | | | | | | | | 30, 47 | | |
| | | | | | | | | | | | | | | 10, 14, 18, | |
| | | | | | | | | | | | | | | 30, 47 | |
| | | | Breaking up, subtracting from left to right. | Sally breaks up the numbers and subtracts from left to right. | | | | | | | | | | | |

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|--|--|--|---|---------|----------------------|-------------|---------|---------|------------|---------|---------|----------------|--------------|------------|
| | | | | | | | | | | | | | | |
| 15 Change the numbers by the same amount | | Revision questions | | | | | | | 3 | | | 47 | | |
| | | Adila changes the amounts by adding 1 to each number. This makes the calculation easier. She knows that this does not change the answer. | | | | | | 30, 40 | | | | 22, 26, 30 | | |
| | | Vusi changes the amounts by subtracting 2 from each number. This makes the calculation easier. He knows that this does not change the answer. | | | | | | 33 | | | | | | |
| | | Abdul adjusts both numbers by 5c. He knows that it will not affect the answer. I adjust both numbers by adding 0,1. (child) | | | | | | 33 | | | | 26 | | |
| 16 Rounding and compensating | | Sindi rounds off 39 to get 40 because it is easier to subtract 40. She then adds 1 to compensate for taking away 1 too many. | | 41 | | | | | | | | | | |
| | | Sindi rounds off 78 to get 80. Takes 80 away from 152 and then adds 2 to compensate for taking away 2 too many. | | 44 | | | | | | | | | | |
| | | That's easy to work out. $69 + 125$ You just add R70 to R125 and then take 1 away. (child) | | | 23 | | | | | | | | | |
| | | Both Dan and Adila are using a rounding and compensating strategy. | | | | | 22, 26 | | | | | 20, 24, 28, 34 | 6 | 18 |
| | | Sally uses a rounding and compensating strategy to calculate the amount. I round and compensate (child) | | | | | | | 12, 17, 37 | | | | | 14 |
| | | Revision questions | | 47 | | | 30, 47 | | 3 | 17 | | 20, 24, 34, 46 | 2 | 28, 47 |
| | | Rounding, multiplying by 10, and compensating Subtracting, rounding and compensating | Sindi prefers to multiply by 10 and then compensate rather than multiply by 9. Abdul firsts subtracts the rands. Next he uses a rounding and compensating strategy to subtract the cents. | | | | | | 44 | | | | 6 | |
| 17 Compensating | Multiplying by 20 and compensating | Revision questions Vusi must remember to subtract this time to compensate for multiplying by 20. | | | 47 42 | | | | | | | | | |
| | Multiplying by 10 and compensating | Revision questions | | | | 27 | | | 46 | 3 | | | | |
| | Breaking up, multiplying by 10 and compensating strategies | Sindi breaks up 11 so that she can multiply by 10 and then compensate. | | | | | | | 41 | | | | | |
| | Rounding, multiplying by 10 and compensating | Sindi prefers to multiply by 10 and then compensate rather than multiply by 9. | | | | | | | 44 | | | | | |
| | Don't worry about the zero and compensate | Revision questions | | | | 44 | | | | | | | | |
| | Rounding and compensating | Both Xolile and Sally are using a rounding and compensating strategy. | | | | | | | | | | 20, 24, 34 | | |
| 18 Multiplication strategy | | Dan uses his multiplication facts to help him divide. Adila uses her multiplication facts to do division. | | | | 7 10, 14 | | | | | | | | |
| | Multiplying the parts | [Breaking up] and multiplying the parts Sally multiplies the parts Revision questions | | | | | | | | | | | 6, 28 47 | |
| | Multiply the number by the same amount | Zoliswa multiplies each number by the same amount to make the calculation easier. | | | | | | | | | | | | 38, 42, 47 |
| 19 Multiple of 5 | | Revision Sindi finds adding 5's easy so she breaks 37 up to make another multiple of 5. | 48 46 | | | | | | | | | | | |
| | Multiplying by 10 | Multiplying by 10 and halving To multiply by 5, Vusi actually multiplies by 10 and halves his answer. Sindi finds multiplying by 10 easy. She uses this when she multiplies by 12. Revision questions Revision questions Revision questions | | | 31 38 47 47 | | | | | | | | | |
| 20 Multiplying by 10 | Multiplying by 10 and adding more | Revision questions | | | | | | | | | | | | |
| | Multiplying by 10 and compensating | Revision questions | | | | | | | | | | | | |
| | "breaking up", "multiplying by 10" and "compensating" strategies | Sindi breaks up 11 so that she can multiply by 10 and then compensate. | | | | | | | 46 | 3 | | | | |
| | "rounding", "multiplying by 10" and "compensating" | Sindi prefers to multiply by 10 and then compensate rather than multiply by 9. | | | | | | | 41 44 | | | | | |
| 21 Multiplying by 100 | Multiplying by 100 and halving | To multiply by 50 Adila actually multiplies by 100 and halves the answer. | | | 35 | | | | | | | | | |
| | Multiplying by 100 and halving | Revision questions | | | 47 | | | | | | | | | |
| 22 Multiplying by 20 | Multiplying by 20 and compensating | Vusi finds multiplying by 20 easy. He uses this when he multiplies by 21. Vusi must remember to subtract this time to compensate for multiplying by 20. | | | 42 42 | | | | | | | | | |
| | Multiplying by 20 and compensating | Revision questions | | | 47 | | | | | | | | | |
| | | Adila divides each number by 10 | | | | 24 | | | | | | | | |
| 24 Divide each number by 100 strategy | | Revision questions | | | | 24 | | | | | | | | |
| 25 FRACTIONS | | Abdul breaks up one fraction in such a way that he can combine fractions to make a whole. | | | | | | | | | 40, 44 | | | |
| | Breaking up fractions to make a whole | | | | | | | | | | 40, 44 | | | |
| | Change the fractions to the same kind | Sally changes the fractions to the same kind before she subtracts. | | | | | | | | | | 38 | | |
| | Multiplying the parts [by using your knowledge of decimals & common fractions] | [Breaking up] and multiplying the parts Xolile uses his knowledge of common fractions to calculate with decimals. Revision questions | | | | | | | | | | | 10, 28 47 | |
| | | Breaking up [%] Abdul is using a breaking up strategy to calculate 50%. | | | | | | | | | | | | 41 |
| | | Xolile breaks 15% up into 10% plus 5% to make calculating easier. 20% of R35,40, that is double 10%... (child) | | | | | | | | | | | | 38 |
| | | "Halving and doubling" [%] Xolile breaks 15% up into 10% plus 5% to make calculating easier. | | | | | | | | | | | | 38 |
| | Multiplying by a unitary fractions | "Dividing by 10 when multiplying by 1/10" Zoliswa divides by 10 when multiplying by 1/10 . Sally knows that calculating 10% of an amount is the same as calculating 1/10 of an amount. | | | | | | | | | | | | 24 34 |