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Coolum State School, Coolum Beach
Coopers Plains State School, Coopers Plains
Crestmead State School, Crestmead
Currumbin State School, Currumbin
Dakabin State School, Dakabin
Elanora State School, Elanora
Greenbank State School, Greenbank
Harristown State School, Toowoomba
Ipswich North State School, North Ipswich
Marsden State School, Marsden
Marymount Primary School, Burleigh Waters
McDowall State School, McDowall

Morayfield East State School, Morayfield
Mountain Creek State School, Mountain Creek
Narangba State School, Narangba
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Scarborough State School, Scarborough
Shailer Park State School, Shailer Park
St Columba's Primary School, Wilston
St Eugene School, Burpengary
St Rita's Primary School, Victoria Point
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Tullawong State School, Caboolture
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Using and Extending Twos and Fives Multiplication Strategies

Mathematical Background
In Level 3, students should be aware that multiplication can be represented in three ways — the set (equal groups) model, the array model and the linear (length) model. This unit begins by demonstrating that all three models involve finding the total for a representation with the same number in each part. The computation strategies studied in this unit encourage students to ‘double’ to multiply by 2, and ‘multiply by 10’ to help multiply by 5. Students use these thinking strategies with number facts and then with two-digit numbers.

Lessons
5.1 Working with Multiplication Models
5.2 Working with Twos Facts and Turnarounds
5.3 Extending the Doubles Strategy to Two-Digit Numbers
5.4 Working with the Fives Facts and Turnarounds
5.5 Extending the Fives Strategy

N 3.3 Multiplication and Division

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Years 1 to 10 Syllabus

Core Learning Outcome
N 3.3 Students identify and solve multiplication and division problems involving whole numbers and decimal fractions in context, selecting from a range of computation methods, strategies and known number facts.

Core Content

Multiplication
- models and language
- combinations of whole numbers and decimal fractions in context
- multiplication facts
  - recall 2s, 4s, 5s and 1s to \( \times 9 \)
  - work out remaining facts

Division
- models and language
  - partition (sharing equally)
  - quotient (equal groups)
- division facts
  - recall 2s, 4s, 5s and 1s
  - work out remaining facts

Connections
- inverse (backtracking)
  - related multiplication and division facts
  - missing factor

Fractions and Proportion
- reducing numbers by \( \frac{1}{2} \)
- enlarging numbers by multiples of \( \frac{1}{2} \) (e.g. \( 1\frac{1}{2} \))

Mental Computation Strategies

Multiplication
- to work out basic facts
  - double, double doubles \( (\times 8) \)
  - build up, build down to known facts
  - turnarounds (commutativity)
- extend basic facts strategies to larger numbers
- student-generated
- generalisations about multiplication

Division
- related multiplication facts
- extend basic facts to other numbers
- student-generated
- generalisations about division

Computation Methods
- mental computations
  - exact
  - approximate
- written recordings
  - student-generated
  - traditional methods [single-digit whole number multipliers and divisors]
- calculators/computers
  - link \( \times \) and \( + \) with \( * \) and / symbols
Assessment

Criteria

On completion of this unit, the students should be able to:

A. solve problems that involve the array, set and linear models of multiplication
B. accurately recall multiplication facts involving twos
C. accurately recall multiplication facts involving fives
D. mentally double two-digit multiples of 10
E. mentally double two-digit numbers that have a product less than 100, such as 32 × 2
F. use a mental strategy to multiply two-digit numbers by 5, such as 36 × 5

Techniques

The following tools can be used to assess the relevant criteria.

1. Investigation A B C D E F
   See opposite page. Add relevant work samples from the activity to student portfolios.

2. Written Diagnostic Task B C D E F
   Allow time for the students to complete the diagnostic task for Unit 5 on page 5 of the GO Check assessment book. You may want to administer the task one or two weeks after completion of the unit.

GO Check, page 5

Using and Extending Twos and Fives Multiplication Strategies

1. Draw lines to match each number sentence with its turnaround below. Then write the answers.
   a. 2 × 8 = __________ b. 3 × 2 = __________ c. 15 × 2 = __________ d. 11 × 2 = __________ e. 16 × 2 = __________
   f. 2 × 13 = __________ g. 2 × 11 = __________ h. 8 × 2 = __________ i. 16 × 2 = __________ j. 15 × 2 = __________

2. Double these numbers. Write your answers around the outside.
   a. 20 b. 30 c. 50 d. 90 e. 80 f. 24 g. 32 h. 14 i. 44 j. 41 k. 35

3. Write the answer to the first fact. Then write the turnaround fact.
   a. 5 × 6 = __________ b. 5 × 4 = __________ c. 5 × 9 = __________
   a. 6 × 5 = __________ b. 4 × 5 = __________ c. 9 × 5 = __________
   a. 5 × 3 = __________ b. 5 × 8 = __________ c. 3 × 5 = __________
   a. 5 × 7 = __________ b. 8 × 5 = __________ c. 7 × 5 = __________

4. Write how you could work out 18 × 5 in your head.

5. Work out these in your head. Then write the answers.
   a. 16 × 5 = __________ b. 14 × 5 = __________ c. 13 × 5 = __________ d. 18 × 5 = __________

Date ___________________________
Investigation

In your life outside school, do you see more examples of multiplication that are equal rows or equal groups?

Ask
- What is multiplication? What does multiplication mean? (Focus on descriptions that mention equal groups or equal rows.)
- What can you see in this classroom that is in equal groups or equal rows? (Focus on the ‘equal’ nature of the groups or rows.)
- What can you think of outside the classroom that you would find in equal rows?
- What can you think of outside the classroom that you would find in equal groups?

Observe
Was the student able to
- identify places where multiplication can be represented in equal rows?
- identify places where multiplication can be represented as equal groups?
- mentally double two-digit numbers? (Choose examples given by the students where there is multiplication by 2.)
- use a mental strategy to multiply two-digit numbers by 5? (Choose examples given by students where there is multiplication by 5.)

Reflect
Collect the examples of places where the different models of multiplication were evident. Re-emphasise the need for a multiplication situation to have equal rows or equal groups. (For example, a bookcase is not an example of multiplication unless all of the shelves have the same number of books.) Use the information gathered to answer the Investigation question. The information found could be collated to make a chart for the classroom.

Recording
✓ Indicate successful achievement of assessment criteria by shading the box for Unit 5 (Level 3A) in N 3.3 of each student’s Student Progress Record in the GO Check assessment book.

X For students who need extra assistance, revisit the relevant parts of the unit or use activities from the Related Classroom Resources listed on the back of this unit.
Working with Multiplication Models

In this lesson, students use cubes to model multiplication problems and describe the representations using a variety of language. The models include equal groups, arrays and linear models. The discussions help link the models.

**Daily Number Sense**

Draw this number line on the board.

![Number line from 80 to 120]

Say: Pretend you made two jumps from 80 to 120. The jumps can be longer or shorter than shown. What could be the length of each jump? How do you know? Encourage students to give pairs of numbers and explain their thinking.

**Activity**

1. Write the following problem on the board.
   
   *Mark packs oranges. He was able to make 3 stacks of boxes with 8 boxes in each stack. How many boxes did he pack?*
   
   Ask: How many boxes did Mark pack? How could we work out the answer? During the discussion, invite volunteers to model the situation with connecting cubes. Encourage them to use a different colour for each stack. Then ask: What is a number sentence we could write for the cubes we are connecting? Encourage a description such as ‘three trains with eight carriages in each’.

2. Hold the cubes in three rows and ask: What does this look like now? What words could we use? Through discussion, bring out the expression ‘three rows of eight’.

3. Ask a volunteer to join the three stacks of cubes end to end and describe the new arrangement. Ask: Does this picture make you think of a new story? Discuss the cubes to bring out the fact that they form a line or train and encourage a description such as ‘three trains with eight carriages in each’.

4. Repeat the discussion above starting with five groups of six cubes. Change the picture to ‘rows of’ and then a ‘line of’ and encourage the students to make up a story for each of the arrangements and write a matching number sentence.

5. Have the students work independently to complete page 19 of the *GO Maths* student journal.

**Reflection**

Discuss the students’ answers to page 19 of the *GO Maths* student journal. Invite individuals to draw pictures on the board as the problems are discussed.
Working with Twos Facts and Turnarounds

This lesson revises the doubles strategy to multiply by 2. The turnaround idea is reinforced so students recall that they can multiply by reading a multiplication number sentence in either order.

**Daily Number Sense**
Repeat the Daily Number Sense discussion from the previous lesson using a number line labelled with 70 and 150.

**Activity**
1. Cut out two rows of six dots from a copy of Blackline Master 5 and show the array to the students. Ask: *What do you see here?* Allow time for students to write two or three facts about the array and then have individuals report observations, such as ‘There are two rows of dots’, ‘The dots are in pairs’, ‘I counted 12 dots’ or ‘I see double six’. Then ask: *What number sentences could we write?* Hold the array two ways (as shown below) to help students identify the two multiplication facts $2 \times 6 = ___$ and $6 \times 2 = ___$. *(Note: Accept students’ responses for the addition fact $6 + 6 = ___$ and relate it to the multiplication sentences above.)*

2. Provide groups of three with a copy of Blackline Master 5. Write *two rows of nine, two rows of eight* and *two rows of seven* on the board and assign students in each group to cut out a picture to match one of the sentences. Then have individuals in the groups take turns to show and describe their arrays to each other.

3. Write $7 \times 2 = ___$ and discuss questions such as: *Who has a picture that shows this number sentence? What is the answer? How do you know? What is another sentence you could write that is the same?* Reinforce thinking that involves doubling seven, turning the card if necessary. Discuss each of the other pictures in the same way.

4. Have the students work independently to complete page 20 of the GO Maths student journal.

**Reflection**
1. Discuss the students’ answers to page 20 of the GO Maths student journal.
2. Write $15 \times 2 = ___$ on the board and ask: *How would you work out the answer to this number sentence? Would you need a picture?* Reinforce the idea that the sentence can be a turnaround and read as ‘two 15s’ or ‘double 15’.

**Materials**
- GO Maths student journal, page 20
- 1 teacher copy of Blackline Master 5
- 1 copy of Blackline Master 5 for each group of students
- Support for each student
- 2 wooden cubes for each group of students, showing the following:
  - Cube 1: double 1, double 2, double 3, double 4, double 5, double 6
  - Cube 2: double 7, double 8, double 9, double 10, double 11, double 12

**Daily Computation Practice**
Say the following number facts in random order. Have the students work quickly to write the answers.
- $12 - 3, 12 - 4, 12 - 5$
- $12 - 7, 12 - 8, 12 - 9$
- $13 - 4, 13 - 5, 13 - 6$
- $13 - 7, 13 - 8, 13 - 9$
- $14 - 6, 14 - 8$

**Consolidation**
In groups, each student takes a turn to roll both cubes and choose one cube’s number to write as a multiplication number sentence. The first player to write six different sentences wins.
5.3

Extending the Doubles Strategy to Two-Digit Numbers

In this lesson, students double numbers beyond the range of number facts. They can use a range of strategies that include splitting the numbers into tens and ones using a known fact or treating the number as a whole quantity.

**Materials**
- **GO Maths student journal**, page 21
- Play money (use Blackline Master 24 from Unit 24)
- Base-10 tens and ones blocks

**Optional**
- 40 blank cards for each group

**Daily Computation Practice**
Say the following number facts in random order. Have the students work quickly to write the answers.

- 18 − 9
- 17 − 8
- 17 − 9
- 16 − 7
- 16 − 8
- 16 − 9
- 15 − 6
- 15 − 7
- 15 − 8
- 15 − 9
- 14 − 5
- 14 − 6
- 14 − 7
- 14 − 8

**Consolidation**
Have the students move into small groups. Encourage each group to write pairs of cards for each multiple of 5 to 100 (as shown below). They can mix and match the cards.

**Activity**

1. Write the following prices on the board.

   \begin{align*}
   &\$18 &\$90 &\$36 &\$43 \\
   \end{align*}

   Say: Pretend that you want to buy two of the same item. Which total costs could you work out in your head? How would you do it? Invite volunteers to select a price, explain why they chose it and describe the thinking they would use (e.g. ‘I know two 25s make 50. I doubled 20 and then doubled 5’).

2. Encourage the students to draw pictures on the board or use play money or base-10 materials to help explain their thinking. Explore all of the strategies for this example before moving to a second price. Bring out strategies such as:
   - Use a known fact: ‘I doubled 9 to get 18.’
   - Use a whole quantity: ‘Two 35s is 70 so two 36s is two more.’
   - Split into parts: ‘Double 40 is 80 and double 3 is 6.’

3. Have the students independently work out two more totals. Encourage them to draw pictures to show their thinking before inviting individuals to share how they worked out the totals.

4. Have the students work independently to complete Question 1 on page 21 of the **GO Maths** student journal.

**Reflection**

1. Discuss the students’ answers to Question 1 on page 21 of the **GO Maths** student journal. Write a multiplication sentence to match the situations. Then have individuals draw pictures or write how they thought (e.g. \(2 \times 43 = \) \___\), or \(40 + 40\) and \(3 + 3\).

2. Have students complete page 21 of the **GO Maths** student journal as time allows.
Working with the Fives Facts and Turnarounds

In this lesson, students revise the ‘multiply by 10 and halve’ strategy to help work out the fives multiplication facts. This is a useful strategy that will be extended to larger numbers in the following lesson.

**Daily Number Sense**

Repeat the Daily Number Sense discussion from Lesson 5.1 using a number line labelled with 80 and 135.

**Activity**

1. Cut out six rows of 10 dots and fold the array in half so the students see six rows of five (as shown here). Ask: What do you see here? How could you work out the total without counting the dots one by one? During the discussion, fold out the flap to show six rows of 10 and ask the students to describe the array. Write the number sentence $6 \times 10 = ___$ on the board, invite responses, and fold back the flap to help students with the strategy. Turn the array and write both facts $6 \times 5 = ___$ and $5 \times 6 = ___$.

2. Provide groups of three with a copy of Blackline Master 5. Write 3 rows of 10, 4 rows of 10 and 5 rows of 10 on the board and assign students in each group to cut out a picture to match one of the sentences. Then have individuals in the groups take turns to show and describe their arrays to each other and the related fives fact.

3. Write $4 \times 5 = ___$ on the board and discuss questions such as: Who has a picture that helps work out this answer? What does your picture show? How can you work out this answer? What is the turnaround for this fact? Have volunteers describe the thinking they could use starting with the 4-by-10 array.

4. Repeat Step 3 to discuss each of the other pictures in the same way.

5. Have the students work independently to complete page 22 of the GO Maths student journal.

**Reflection**

1. Discuss the students’ answers to page 22 of the GO Maths student journal.

2. Have volunteers take turns to write the fives multiplication facts with turnarounds in order (e.g. $1 \times 5 = ___ = 5 \times 1$, $2 \times 5 = ___ = 5 \times 2$, $3 \times 5 = ___ = 5 \times 3$, and so on).

Then ask: What patterns do you notice? What factors have ‘tens’ as answers? (Multiplying by an even number gives a 10.) What factors have a 5 in the ones place?

**Materials**

- GO Maths student journal, page 22
- GO Figure computation practice book, page 9
- 1 teacher copy of Blackline Master 5
- 1 copy of Blackline Master 5 for each group of 3 students
- Scissors for each student

**Optional**

- Fundamentals (Ages 8–9), pages 28–31

**Daily Computation Practice**

Have the students work as quickly as possible to complete page 9 of the GO Figure computation practice book.

**Consolidation**

Extending the Fives Strategy

In this lesson, students apply the ‘multiply by 10 and halve’ strategy to help them multiply two-digit numbers by 5.

Daily Number Sense
Repeat the Daily Number Sense discussion from Lesson 5.1 using a number line labelled with 65 and 120.

Activity
1. Display 12 of the base-10 tens on an overhead projector or hold them in front of the class. Ask: What do these blocks show? What is a number sentence we could write about this number of blocks? Encourage the students to describe the representation and the total. Bring out the number sentence 12 \times 10 = 120 and write it on the board.
2. Repeat the discussion for 18 tens, 24 tens and 28 tens. Leave all of the number sentences on the board.
3. Now write 12 \times 5 = ___ just under the 12 \times 10 number sentence and place 12 tens on the overhead projector. Ask: What is the answer to this sentence? How could we use the picture to help? Encourage the students to recall the halving strategy used in the previous lesson to work out the fives facts. Cover the lower half of the blocks (as shown below) and ask: What is half of 120? Complete both number sentences.
4. Use base-10 tens to repeat the discussion for the other number sentences on the board.
5. Have the students work independently to complete page 23 of the GO Maths student journal.

Reflection
1. Discuss the students’ answers to page 23 of the GO Maths student journal.
2. Write the number sentence 14 \times 5 = ___ on the board and ask: What number sentence could you write that would help work out this answer? How does the sentence help? Invite a volunteer to write the related sentence and describe the thinking to complete the first sentence. Repeat the discussion for 25 \times 5 = ___.

Materials
- GO Maths student journal, page 23
- GO Figure computation practice book, page 10
- 30 base-10 tens blocks
- Overhead projector

Optional
- 27 blank cards for each group
Revising Multiplication Models

1. Write a story problem for this number sentence: 5 × 7 = ____

2. For each of these:
   - draw a rectangle **around** the correct number of dots
   - write 2 number facts for the dots **inside** your rectangle
   - write 2 number facts for the dots **outside** your rectangle

   - **Draw 12 rows of 5 dots.** List pairs of number sentences to show how you could divide the array into 2 parts.

   - **Draw 7 rows of 5 dots:**
     - Inside: 7 × 5 = 35
     - Outside: 3 × 5 = 15

   - **Draw 2 rows of 5 dots:**
     - Inside: 5 × 5 = 25
     - Outside: 8 × 5 = 40

   - **Draw 4 rows of 5 dots:**
     - Inside: 4 × 8 = 32
     - Outside: 6 × 5 = 30

   - **Draw 1 row of 5 dots:**
     - Inside: 5 × 5 = 25
     - Outside: 9 × 5 = 45

   - **Double these numbers:**
     - 2 × 10 = __
     - 4 × 10 = __

   - **Write numbers you can double in the purple box:**
     - 23 46
     - 50 84
     - 60 120

   - **Double these numbers:**
     - 23 × 2 = __
     - 46 × 2 = __

   - **Write a twos number fact and its turnaround for each picture:**
     - 9 × 5 = 45
     - 5 × 9 = 45

   - **Write the numbers that were doubled to get these answers:**
     - a. Double ____ = 180
     - b. Double ____ = 130

   - **Then write the matching multiplication sentence.**

   - **Then write the answers.**

   - **Look at matching pairs of facts in Question 2. Colour the fact you found easier to do first.**

   - **Draw 12 rows of 5 dots.** List pairs of number sentences to show how you could divide the array into 2 parts.

   - **Draw 7 rows of 5 dots:**
     - Inside: 7 × 5 = 35
     - Outside: 3 × 5 = 15

   - **Draw 2 rows of 5 dots:**
     - Inside: 5 × 5 = 25
     - Outside: 8 × 5 = 40

   - **Draw 4 rows of 5 dots:**
     - Inside: 4 × 8 = 32
     - Outside: 6 × 5 = 30

   - **Draw 1 row of 5 dots:**
     - Inside: 5 × 5 = 25
     - Outside: 9 × 5 = 45

   - **Answers will vary. This is one example.**

   - **Draw 12 rows of 5 dots.** List pairs of number sentences to show how you could divide the array into 2 parts.

   - **Draw 7 rows of 5 dots:**
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     - Inside: 4 × 8 = 32
     - Outside: 6 × 5 = 30

   - **Draw 1 row of 5 dots:**
     - Inside: 5 × 5 = 25
     - Outside: 9 × 5 = 45

   - **Answers will vary. This is one example.**

   - **Draw 12 rows of 5 dots.** List pairs of number sentences to show how you could divide the array into 2 parts.
1. For each of these, write the answer to the tens number fact.
   - Draw an arrow to the number sentence you could use to help work out the total.
   - Then write the answer to the tens number fact. Then write the turnaround fact.

2. Complete each of these. Use the tens fact to help you work out the facts.
   - Write how you could work out 18 × 5 in your head.
   - Write the answer to the tens fact. Then write the turnaround fact.

3. Draw a line to match each number sentence with its turnaround below.
   - Write the letter above its matching number at the bottom of the page. The first one has been done for you.

GO Figure, page 9

How many pure breeds of dogs are there?

Figure out the answer to each of these. Then use the answer and its matching letter to find and shade a square in the grid below. The letter is the column and the answer is the row. The first one has been done for you.

GO Check, page 5

Using and Extending Twos and Fives Multiplication Strategies

1. Draw lines to match each number sentence with its turnaround below. Then write the answers.

2. Double these numbers. Write your answers around the outside.

3. Write the answer to the fives fact. Then write the turnaround fact.

4. Write how you could work out 18 × 5 in your head.

5. Work out these in your head. Then write the answers.

ANSWERS

Student Journal, page 23

Extending the Fives Strategy

1. For each of these, write the answer to the tens number fact.
   - colour half the picture and then complete the fives fact.
   - Draw an arrow to the number sentence you could use to help work out the total.
   - Then write the answers.

2. Complete each of these. Use the tens fact to help you work out the facts.
   - Write the answer to the fives fact. Then write the turnaround fact.

3. Draw a line to match each number sentence with its turnaround below.
   - Write the letter above its matching number at the bottom of the page. The first one has been done for you.

GO Figure, page 10

What do you do when you wear your shoes out?

For each of these, draw a line to the correct number in the middle of the shoe. Then write the answer through a number sentence in the shoe.

Write the answer above its matching number on the bottom of the page. The first one has been done for you.

Answers will vary. This is one example.
Rows of Dots
Blackline Master 5

Note: Enlarge this page onto A3 paper.
Lesson 5.2

Working with Twos Facts and Turnarounds

Materials

1 teacher copy of
Blackline Master 5
1 copy of Blackline Master 5 for each group of 3 students
Scissors for each student

Optional
2 wooden cubes for each group of students, showing the following:
- Cube 1: double 1, double 2, double 3, double 4, double 5, double 6
- Cube 2: double 7, double 8, double 9, double 10, double 11, double 12

Related Classroom Resources

GO Check p. 5

Level 3A Unit 5.4

Working with the Fives Facts and Turnarounds

Materials

1 teacher copy of
Blackline Master 5
1 copy of Blackline Master 5 for each group of 3 students
Scissors for each student

Optional
Fundamentals (Ages 8–9), pp. 28–31

Related Classroom Resources

GO Figure p. 9

Level 3A Unit 5.3

Extending the Doubles Strategy to Two-Digit Numbers

Materials

Play money (use Blackline Master 24 from Unit 24)
Base-10 tens and ones blocks

Optional
40 blank cards for each group

Related Classroom Resources

Mathletics (Ages 8–9), pp. 6–11

GO Figure p. 9

Level 3A Unit 5.2

Working with the Fives Facts and Turnarounds

Materials

15 × 2 = _____

d.

==

p. 20

Extending the Fives Strategy

17 × 2 = _____

b.

14

Working with the Fives Facts and Turnarounds

c.

Lesson 5.4

11 × 2 = _____

N 3.3

17/2/10   3:24:40 PM

8 × 2 = _____

e.

9

Grade 4 - Unit 5.indd   12

30 base-10 tens blocks

30 base-10 tens blocks

40 blank cards for each group

Base-10 tens and ones blocks

Mathletics (Ages 8–9),

Mathletics

Related Classroom Resources

For each group of 3 students

Optional

2.2.

1.

2.1.

2.

1.

2.

1.

Draw an arrow to the number sentence you could use to help work out the total.

Write numbers you can double in the purple box.

Double these numbers. Write your answers around the outside.

Work out the cost of buying 2 of each of these.

a.

Extending the Doubles Strategy to Two-Digit Numbers

24 × 5 = _______

d.

e.

f.

2.2.

2.

1.

2.

1.

1.

1.

1.

Draw a picture to help solve each problem.

Write numbers you can double in the purple box.

Double these numbers. Write your answers around the outside.

Outing

GO Figure p. 10

Student Journal p. 23

GO Figure

Level 3A Unit 5.3

Extending the Doubles Strategy to 2 Digits

24 × 5 = _______

d.

e.

f.

2.2.

2.

1.

2.

1.

1.

1.

Draw an arrow to the number sentence you could use to help work out the total.

Write numbers you can double in the purple box.

Double these numbers. Write your answers around the outside.

Work out the cost of buying 2 of each of these.

a.

Extending the Doubles Strategy to Two-Digit Numbers

24 × 5 = _______

d.

e.

f.

2.2.

2.

1.

2.

1.

1.

1.

Draw an arrow to the number sentence you could use to help work out the total.

Write numbers you can double in the purple box.

Double these numbers. Write your answers around the outside.

Work out the cost of buying 2 of each of these.

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Extending the Doubles Strategy to Two-Digit Numbers

24 × 5 = _______

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e.

f.

2.2.

2.

1.

2.

1.

1.

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Extending the Doubles Strategy to Two-Digit Numbers

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Extending the Doubles Strategy to Two-Digit Numbers

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f.

2.2.

2.

1.

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1.

1.

1.

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Extending the Doubles Strategy to Two-Digit Numbers

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Extending the Doubles Strategy to Two-Digit Numbers

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1.

1.

1.

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Write numbers you can double in the purple box.

Double these numbers. Write your answers around the outside.

Work out the cost of buying 2 of each of these.

a.