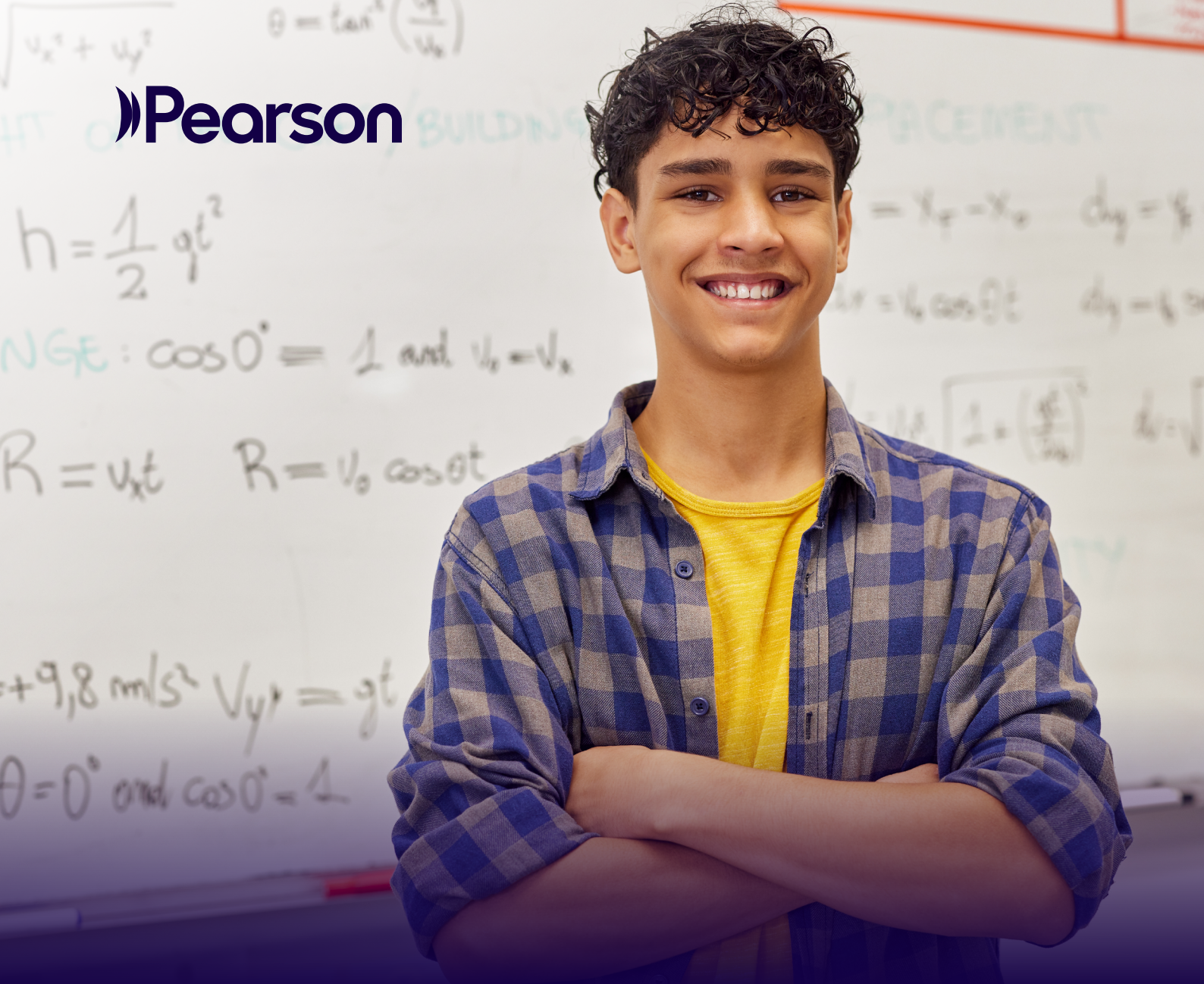




Pearson Mathematics Stage 4 and 5 New South Wales

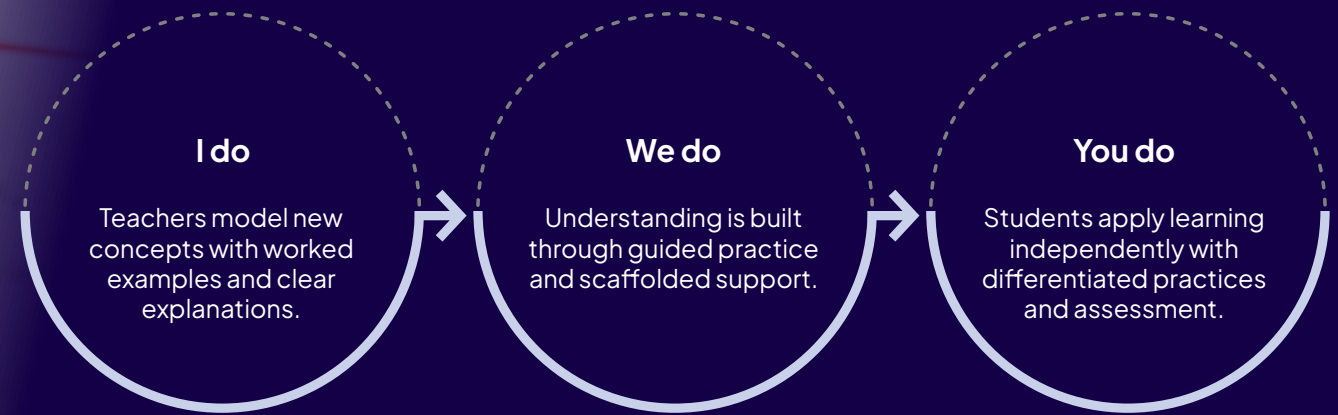
Evidence-based teaching without the workload

Supporting you to reduce maths anxiety, build student confidence and create the conditions for improved learning outcomes.

- Support explicit teaching with ready-to-use lessons, practice, and assessment
- Build student confidence with a structured, low-cognitive-load approach
- Reduce planning time with connected print and digital resources
- Track progress with integrated assessment and reporting

This gradual release approach helps students build confidence, reduce overwhelm and develop the skills to become independent learners.

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Teaching programs, curriculum mapping, and ready-made topic tests support confident planning and delivery.

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Topic scope and sequence

TOPIC 1

TOPIC 1: COOPERATION WITH INTERIM

Students learn about the importance of cooperation and how to work together to achieve a common goal. They learn about the importance of communication and how to work together to solve problems. They learn about the importance of teamwork and how to work together to achieve a common goal.

Personal Development activities

- Addition facts
- Subtraction facts
- Multiplication facts (tables)
- Division facts
- Measuring (mass/volume)
- Measurement and division (1 and 10)

Learning intention and success criteria

Learning focus

Learning intention: To be able to:

- Understand the importance of cooperation and teamwork
- Understand the importance of communication and teamwork
- Understand the importance of teamwork and teamwork

Success criteria:

- SC 1 - D1: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 7

Computation with integers

Understand integers and operations

Learning intention: To understand integers and operations

Success criteria

- SC1: I can plot integers on a number line.
- SC2: I can compare and order integers.
- SC3: I can determine the magnitude and direction of integers.

SC1: I can plot integers on a number line

Worked example: Locating and plotting integers on a number line

Show the position of the integers $-8, -4, -1, 3$ and 9 on the number line.

Thinking	Working
Plot the negative numbers to the left of zero and the positive numbers to the right of zero.	

1 For each set of integers, show their position on the number line.

(a) $-5, -3, 0, 2$ and 6



(b) $-8, -5, -4, -2, 1, 4, 7$ and 10



(c) $-7, -3, -2, 3, 5$ and 9



2 Identify each of the integers



Understand integers and operations

Learning intention: To understand integers and operations

Success criteria

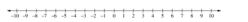
- SC1: I can locate and plot integers on a number line.
- SC2: I can compare and order integers.
- SC3: I can determine the magnitude and direction of integers.

Learning intention:

SC2: I can compare and order integers

Important to know

Moving away from zero to the left on the number line, negative numbers represent smaller or fewer values. Moving away from zero to the right on the number line, positive numbers represent larger or higher values.



A quick look at the values on a number line is that numbers towards the left are smaller or less than numbers towards the right.

For example

On the number line you can see that -5 is further than -3 , therefore -5 is less than -3 ($-5 < -3$). Alternatively, 5 is further than -3 , therefore 5 is greater than -3 ($5 > -3$).

Quickly identify misconceptions and generate targeted activities to address gaps and support progress.

Quickly identify misconceptions and generate targeted activities to address gaps and support progress.

TOPIC 3: ALGEBRA TECHNIQUES

Outcome code: MA4-ALG-C-01: generalises number properties to operate with algebraic expressions including expansion and factorisation

NSW Mathematics K-10 Syllabus © Copyright 2023 NSW Education Standards Authority

Pearson Diagnostic quizzes

☐ Relational thinking

☐ Values for letters

☐ Letters for numbers or objects

☐ Writing expressions involving multiplication, addition and subtraction

Lesson 1.10% Completed

Understand and identify common factors and multiples

- Introduction
- SC 1.1: can determine the highest common factor (HCF) of a pair of numbers
- SC 2.1: can determine the lowest common multiple (LCM) of a pair of numbers
- SC 3.1: can solve problems involving highest common factors and lowest common multiples
- Lesson review

Finding the highest common factor (HCF)

Worked example See it as a video [Check your understanding](#)

Finding the highest common factor (HCF)

Question 1

Complete the questions below to determine the highest common factor (HCF) of 20 and 36.

The factors of 20	The factors of 36	The common factors of 20 and 36	The highest common factor (HCF) of 20 and 36

Regular checks for understanding provide immediate feedback and inform next steps in teaching.

Regular checks for understanding provide immediate feedback and inform next steps in teaching.

Create custom digital tests from thousands of questions.

Create custom digital tests from thousands of questions.

Create assessment

Start to develop your own assessment by selecting the subject, year level and topics.

Search questions by keyword

Step 1: Add details

Step 2: Add details and edit

Step 3: Review and publish

Search results (1)

Topic: Linear inequalities [Permalink \(hidden\)](#)

The intersecting region on a graph is determined by the inequalities $y < 2x + 1$ and $y > -x + 2$. Select the points below that lie in the region.

Topic: Linear inequalities [Permalink \(hidden\)](#)

The graph shows a region defined by two linear inequalities. Use the graph to identify the features of the boundary lines.

Topic: Linear inequalities [Permalink \(hidden\)](#)

The graph shows the region defined by a linear inequality.

Topic: Linear inequalities [Permalink \(hidden\)](#)

The shaded region in the diagram represents an inequality. Decide if each statement is true or false.

Big question: A region defining two linear inequalities is shown on the graph to identify the features of the boundary lines.

Big question: Which of the points below lie in the region?

Assessment builder

Create your own custom assessments from a bank of thousands of curated questions

Create assessment

Lesson 10: Area of a Rectangle

Calculate the area of a rectangle

Introduction

SC 1.1 can distinguish between area and perimeter

SC 2.1 can convert between units and use a formula to determine the area of a rectangle

SC 3.1 can determine the areas of composite shapes

Lesson review

Practice

Complete these questions in your notebook.

- A rectangle has an area of 12 m^2 .
 - Determine all possible units of measurement with whole-number values.
 - Calculate the perimeter of each shape.

Answers

- A rectangle has an area of 36 cm^2 .
 - Determine all possible units of measurement with whole-number values (including the square).
 - Calculate the perimeter.

Answers

- A rectangle has a perimeter of 40 cm.
 - Determine all possible units of measurement.
 - Calculate the area.

Answers

- A rectangle has a perimeter of 30 cm.
 - Determine all possible units of measurement.
 - Calculate the area.

Answers

- A rectangle has a perimeter of 30 cm.
 - Determine all possible units of measurement.
 - Calculate the area.

	Lesson name	Learning intention and success criteria	Differentiating Independent practice
Calculate the area of a rectangle		Learning intention: To be able to calculate the area of a rectangle Success criteria: SC 1: I can convert between units and use a formula to determine the area of a rectangle. SC 2: I can determine the area of a composite shape.	SC 1: Q1, 2 and 3 SC 2: Q1, 2 and 3 SC 3: Q1, 2 and 3
			SC 1: Q1, 2 and 3 SC 2: Q1, 3, 4 and 5 SC 3: Q1, 3, 4 and 5
			SC 1: Q1, 2, 3, 4 and 5 SC 2: Q1, 2, 3, 4, 5 and 6 SC 3: Q1, 2, 3, 4, 5 and 6

Editable topic tests aligned to lessons help measure progress without additional preparation.

Editable topic tests aligned to lessons help measure progress without additional preparation.

Ready-made assessments

Search assessments

	Curriculum New South Wales -	Syllabus Mathematics -	Year level Stage 4 -	Topic
Digital assessments	Possible assessments			
	Possible assessment Topic test: Computation with integers Mathematics NSW (Stage 4) Topics: 1. Computation with integers 20 questions			
	Possible assessment Topic test: Data classification and visualisation Mathematics NSW (Stage 4) Topics: 10. Data classification and visualisation 20 questions			
	Possible assessment Topic test: Understanding fractions and decimals Mathematics NSW (Stage 4) Topics: 2. Understanding fractions and decimals 20 questions			
	Possible assessment Topic test: Algebraic techniques Mathematics NSW (Stage 4) Topics: 3. Algebraic techniques 20 questions			
	Possible assessment Topic test: Understanding percentages Mathematics NSW (Stage 4) Topics: 4. Understanding percentages 20 questions			

Ready-made assessments

Browse and edit ready-made assessments designed for your curriculum

Browse library

Assessments > Possible assessments > Topic tests > algebraic techniques

Topic test: Algebraic techniques

[+ Filter](#)

Ready-made assessment
 Mathematics NSW (Stage 4) Topics: 3. Algebraic techniques
 20 questions

Topic test: Algebraic techniques

Student name:

Class:

Teacher:

Multiple choice questions
in each row

Which statement is incorrect?

Question 1
 Sam has 4kg of apples, which he sells in 50g bags. How many 10 kg boxes does he need?
 The total number of apples that Sam has can be written using digits as:
 A. 4 × 10 = 40 B. 4 × 10 = 400 C. 4 × 10 = 4000 D. 4 × 10 = 40000

Clear reporting helps you track progress, identify gaps, and adjust teaching with confidence.

Clear reporting helps you track progress, identify gaps, and adjust teaching with confidence.

Understand and identify common factors

Lesson review

DUE DATE
31 Jul

SUBMITTED
4/26

CLASS AVERAGE
66.67%

Sort by: Most recent first

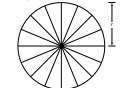
Download as .csv

Student	Score	1	2	3
Daniel Ross	67%			
Simon Cowell	67%			
Davey Gee	100%			
Flick delpidor	33%			

SC.5.1.1.1 can calculate the formula for the area of a circle using approximations.

Worked example: Establishing the formula for the area of a circle from the circumference of a circle

Establish a formula for the area of a circle using the circumference formula $C = 2\pi r$ and this circle that has been divided into sixteen equal sectors.



Thinking	Working
Each approximates to cut out half of them are placed with curves along its line and the other half are inserted in the gaps. Label the base, b, and height, h, of the shape.	
Describe the approximate shape. Determine the dimensions, in terms of the radius, using the area length on the base. Notice the more sectors used, the more the shape becomes like a rectangle. Confirming the area in terms of the radius.	

Worked example
See it as a video
Check your understanding

Worked example: Establishing the formula for the area of a circle from the circumference of a circle

Establish a formula for the area of a circle using the circumference formula $C = 2\pi r$ and this circle that has been divided into sixteen equal sectors.



The shape approximates to a rectangle with dimensions:

- The length is the circumference of the circle.
- The height is the radius of the circle.

The area of the rectangle is:

$$A = \text{length} \times \text{height}$$

$$A = C \times r$$

Substituting the circumference formula $C = 2\pi r$ into the area formula gives:

$$A = 2\pi r \times r$$

$$A = 2\pi r^2$$

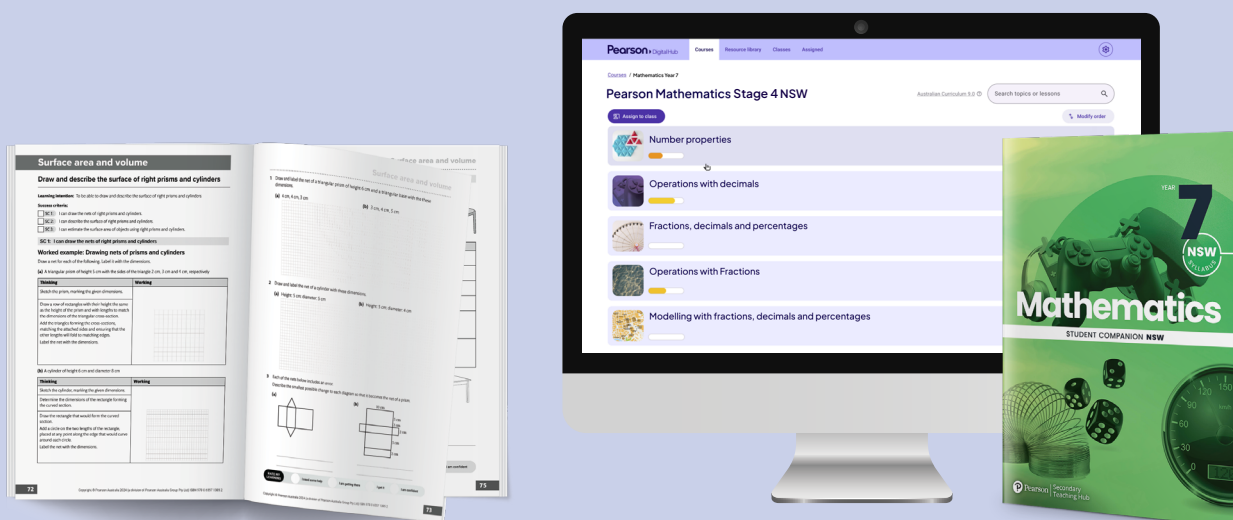
Therefore the area of a circle is:

$$A = \pi r^2$$



The best support for evidence-based teaching

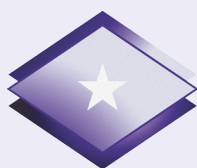
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Year 10 Mathematics Student Companion NSW	9780655715931

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