Geometry



Parallel lines are always the same distance apart and will never meet.

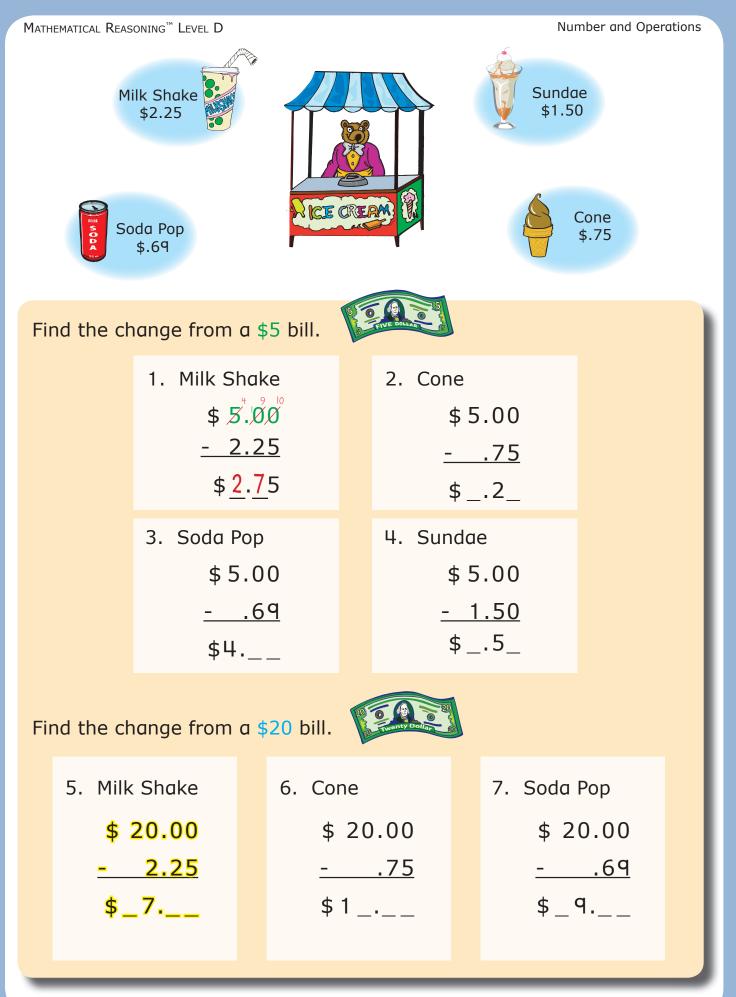
Perpendicular lines meet at right angles.

1. Draw a line segment parallel to the one given.

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2. Draw a line segment perpendicular to the one given.

		 • •<	
qu	mplete the square, then answer the estions. How many pairs of parallel lines are made with the lines of this square?	 • •<	
4.	How many pairs of perpendicular lines are made with the lines of this square?		



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Lee

Brenda

Mia

Will

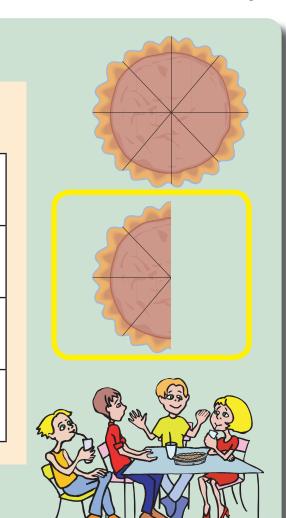
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find how many pieces each person ate.

Lee, Brenda, Mia, and Will have a pie and a half to share. Use the chart and the clues to

- 1. Lee had less than half a pie, but didn't have the least pie.
- 2. Brenda had less than Lee, but didn't have the least pie.
- 3. Mia had more pie than Will.

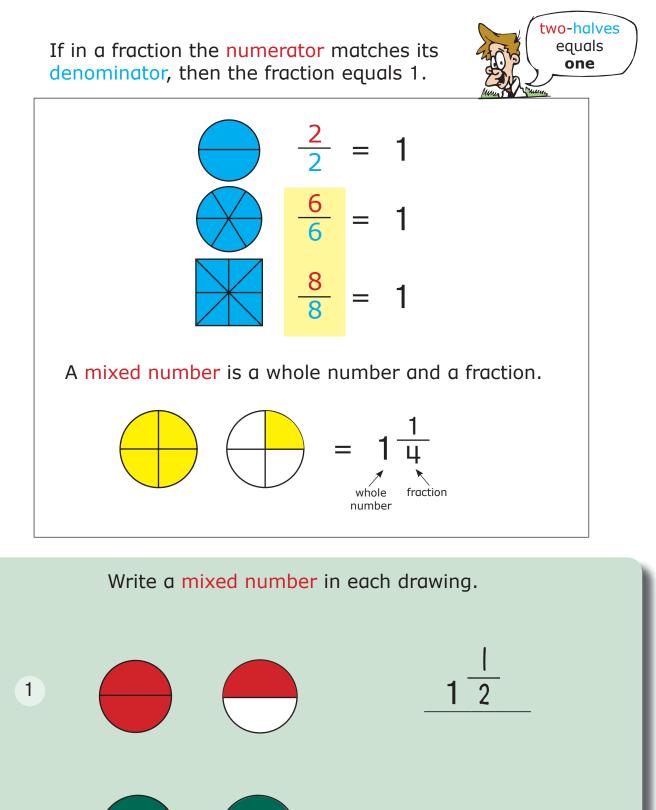
 $\frac{1}{8}$ $\frac{2}{8}$ $\frac{3}{8}$ $\frac{6}{8}$



MATHEMATICAL REASONING[™] Level D



Number and Operations



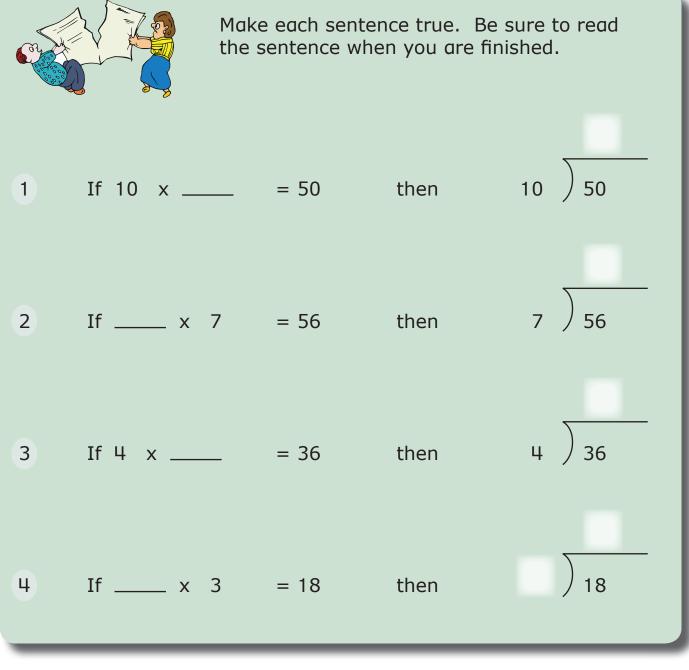
2

Division is the inverse operation of multiplication.

You can use division to prove your multiplication or use multiplication to prove your division.



If **three** 4s equal **12** then **12** divided by 4 equals **3**.



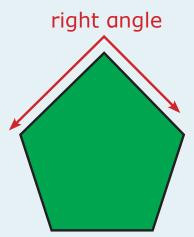
(page updated)

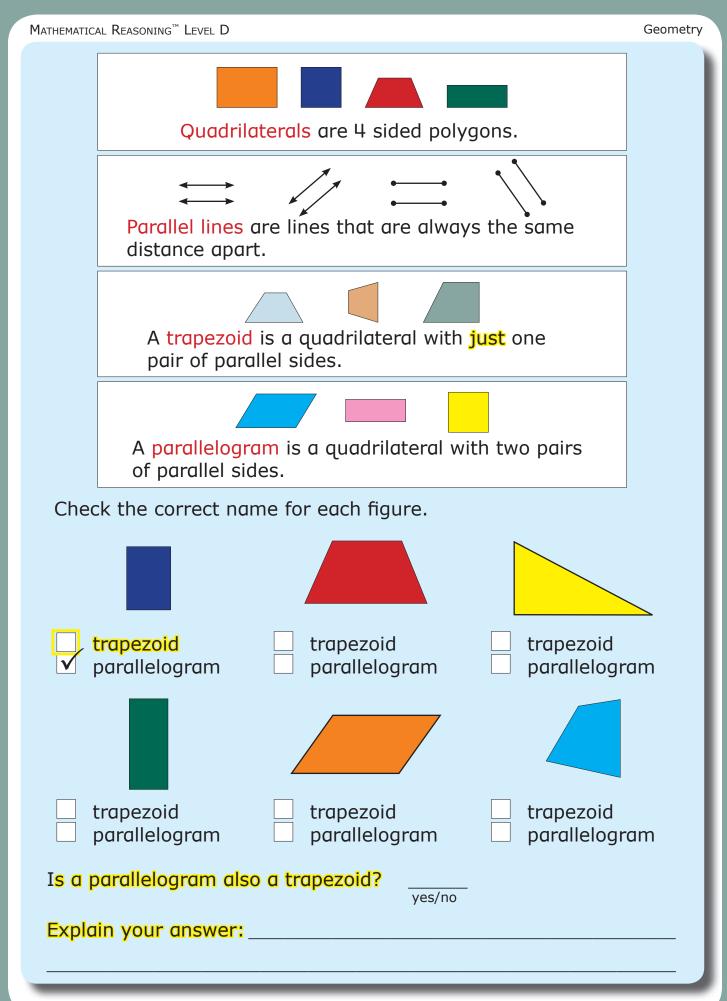
The sides of this pentagon are made up of **5 line segments** and the corners form 5 angles. One of the angles is a right angle (use corner of paper to tell). The other 4 angles are obtuse.

- Hexagon: A 6-sided polygon
- Pentagon: A 5-sided polygon
- Square: A rectangle with 4 equal sides
- **Right Triangle**: A triangle that has a right angle
- Equilateral Triangle: A triangle with 3 equal sides

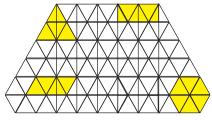


		Number of Sides	Number of Angles	Number of Right Angles	Name the polygons in problem 1 – 8.
1.		4	4	4	Rectangle
2.	\bigcirc				
3.	\bigtriangleup				
4.					
5.					Parallelogram
6.	$\langle \rangle$				
7.					Trapezoid
8.					

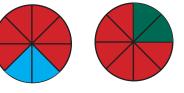




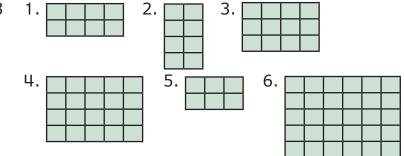
Page 67 Drawings will vary. Example:



- Page 68 1. March 20; 2. February 16; 3. March 8; 4. March 28; 5. eight weeks six days; 6. 48 days; 7. 4 weeks
- Page 69 1. 2011; 2. 36 months; 3. 15 years old; 4. 9 years 2 months; 5. 10 years old; 6. 18 months
- Page 70 1. 7 inches; 2. 3 yards; 3. 12 feet 4. 8 inches; 5. 700 miles; 6. 2 inches; 7. 10 feet; 8. 100 yards
- Page 71 1. black and **brown**; 2. blue and red; 1. blue, vertical; 2. green, horizontal
- Page 72 MOTHEMATICS
- Page 73 a. \$9.62, \$5.63, \$13.47, \$6.19, \$1.01; b. \$6.64, \$6.09, \$8.47, \$11.29, \$6.73; c. \$8.24, \$6.59, \$3.28, \$7.22, \$11.44; d. \$4.82, \$10.42, \$23.64, \$16.17, \$8.54
- Page 74 1. \$2.75; 2. \$2.25; 3. \$4.31; 4. \$3.50; 5. \$17.75; 6. \$19.25; 7. \$19.31
- Page 75 a. 12, 18, 28, 24, 72, 36, 3, 0; b. 20, 16, 49, 35, 81, 8, 6, 48; c. 30, 64, 32, 21, 42, 14, 7, 5
- Page 76 1. 90°F; 2. 30°F; 3. 50°F; 4. 350°F; 5. 40°F
- Page 77 1. 32°C; 2. 1°C; 3. 10°C; 4. 180°C; 5. 3°C
- Page 78 1. 2 pints; 2. 2 pints; 3. 2 gallons; 4. 2 quarts; 5. 1 quart
- Page 79 1. 400 mL; 2. 10mL; 3. 500 mL; 4. 3 L; 5. 2 L; 6. 1000 L; 7. 10 mL; 8. 2 L
- Page 80 Coloring will vary. Examples:



- Page 81 1. blue; 2. yellow; 3. no
- Page 82 1. yellow, blue, red; 2. heads, tails; 3. green; 4. 1 in 8, 5 in 8, 2 in 8
- Page 83



MATHEMATICAL REASO	NING [™] Level D Answers
Page 216	1. All figures are polygons except the circle and half circle.
	All the four-sided figures are quadrilateral
	2; 3; 4. No; 5. Yes
Page 217	P; T; none; P; P; none; No, because a trapezoid has just one
	pair of parallel sides and a parallelogram has two.
Page 218	1. ; 2. ; 3. ; 4. ;
	5. $(1, 2, 2, 3, 3, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5,$
Page 219	2. 1 out of 7 are blue, $\frac{1}{7}$; 3. 2 out of 7 are yellow, $\frac{2}{7}$;
	4. 1 out of 7 are green, $\frac{1}{7}$; 5. 1 out of 8 are pink, $\frac{1}{8}$
Page 220	b. $\frac{4}{8}$, $\frac{4}{6}$; c. $\frac{4}{6}$, $\frac{6}{7}$; d. $\frac{6}{8}$, $\frac{3}{12}$; e. $\frac{3}{12}$; f. $\frac{6}{10}$,
Page 221	a. <; b. >; c. >; d. <; e. >; f. <; g. >; h. =; i. <; j. >;
	k. <; l. =; m. >; n. =; o. =
Page 222	a. 6; b. 15; c. 20; d. 8; e. 9; f. 6; g. 40; h. 72; i. 12; j. 20; k. 18; l. 12
Page 223	Estimates will vary. 1. 1 inch; 2. 4 inches; 3. 5½ inches;
	4. 2 ¹ / ₂ inches; 5. 5 inches
Page 224	$a\frac{1}{4}; e 1\frac{1}{2}; c 2\frac{7}{8}; m 3\frac{3}{8}; d 4; i 5\frac{1}{8}; 5\frac{3}{4}; decimal$
Page 225	1. intersecting lines; 2. parallel lines; 3. right angle; 4. acute angle
Page 226	
Page 227	1. \$3.92; 2. \$3.82; 3. \$2.22; 4. \$3.35; 5. \$1.70; 6. \$1.75
Pages 228-229	a. \$2.75; b. \$1.65; c. \$3.20; d. \$4.50; e. \$3.10; f. \$3.25;
Pages 230-231	 g. \$7.50; h. \$3.40; i. \$1.75; j. \$5.00; k. \$5.10 1. sandwich, hamburger; 2. sandwich, taco, pizza; 3. hamburger, hamburger, hamburger; 4. hamburger, pizza, soup, soup; 5. sandwich, sandwich, sandwich, pizza; 6. sandwich, taco, hamburger, pizza, soup; 7. hamburger, hamburger, hamburger, hamburger, pizza
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