Independent Recap

Geometry Week 10

Year 5

Arithmetic

1. $\frac{3}{10}$ of 60

2. $\frac{2}{5} + \frac{1}{3}$
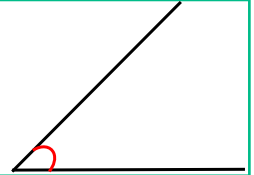
3. 80 x 20

4. 8 x 5

Practice: Measuring angles up to 180°

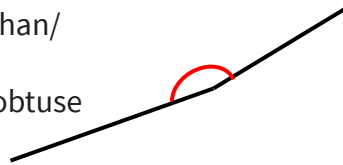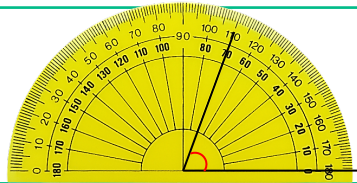**5.** Recap: How many degrees are in a right angle?

6. The angle is greater than/ less than a right angle.
This angle is an acute/ obtuse angle.

7. The angle is greater than/ less than a right angle.
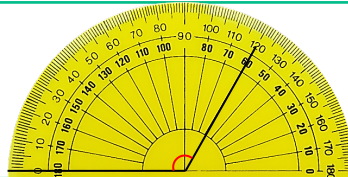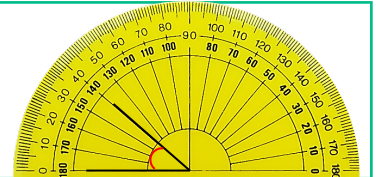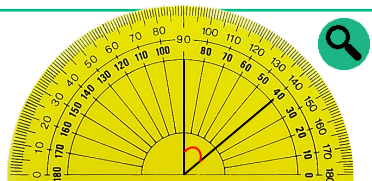This angle is an acute/ obtuse angle.

8. a. On an analogue clock, the turn from 12 o'clock to 6 o'clock is ?°.
b. On an analogue clock, the turn from 12 o'clock to 9 o'clock is ?°.

9. What angle is shown?

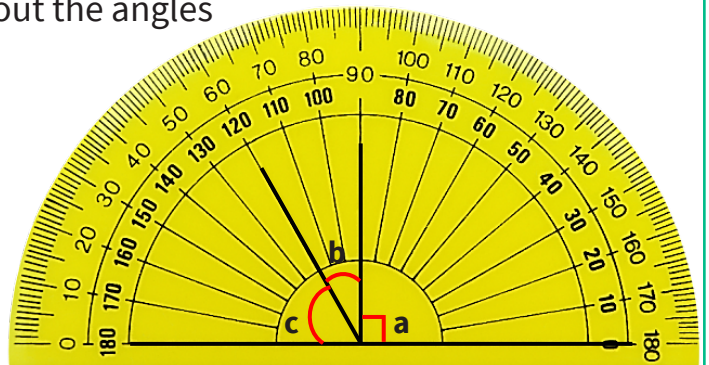**10.** Explain how to use a protractor.

11. What angle is shown?

12. What angle is shown?

13. Tillie says the angle is 90°. Is she correct?

14. Write as many sentences as you can about the angles shown.

You might want to talk to an adult

Spot the mistake

Answers

| Q no.	Question	Answer
1	$\frac{3}{10}$ of 60	18
2	$\frac{2}{5} + \frac{1}{3}$	$\frac{11}{15}$
3	80 x 20	1,600
4	8 x 5	40
5	How many degrees are in a right angle?	90°
6	The angle is greater than/ less than a right angle. This angle is an acute/ obtuse angle.	less than, acute
7	The angle is greater than/ less than a right angle. This angle is an acute/ obtuse angle.	greater than, obtuse
8	a. On an analogue clock, the turn from 12 o'clock to 6 o'clock is ?°. b. On an analogue clock, the turn from 12 o'clock to 9 o'clock is ?°	a. 180°, b. 270°
9	What angle is shown?	70°
10	Explain how to use a protractor.	The cross at the middle of the protractor needs to be placed where the two lines meet on the angle. the 0° line of the protractor should be aligned with one of the lines. Then the second line should be found on the protractor, moving from 0° to the second line.
11	What angle is shown?	120°
12	What angle is shown?	40°
13	Tillie says the angle is 90°. Is she correct?	Tillie has not placed the protractor on the 0°. While it is possible to calculate the angle from this, she has not correctly calculated the angle. The actual angle shown is 50°.
14	Write as many sentences as you can about the angles shown.	Accept answers that accurately represent the angles. Example sentences: Angle a is 90° Angle b and angle a are a total of 120° Angle b is 30°

Protractors

7a
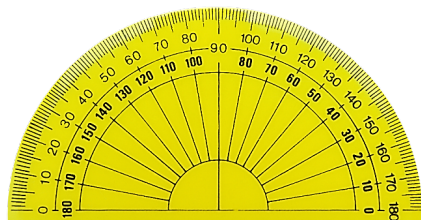
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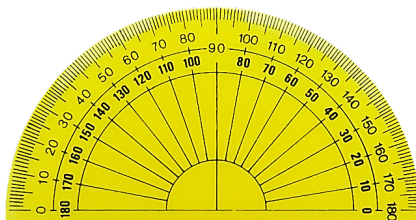
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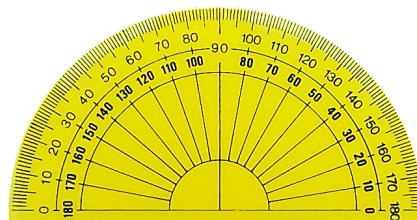
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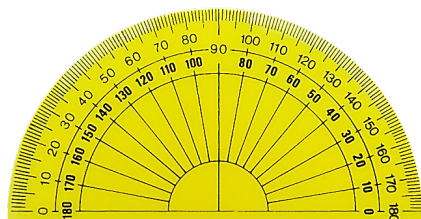
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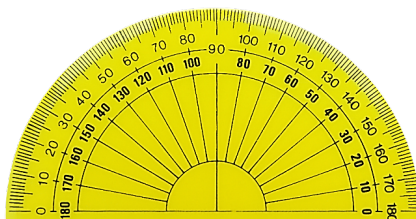
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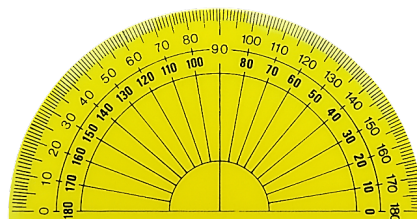
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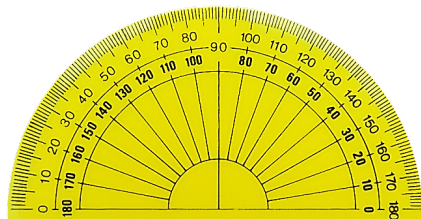
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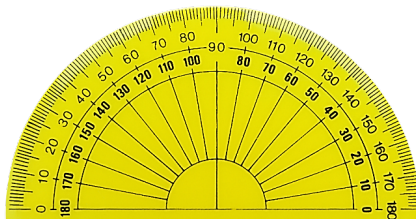
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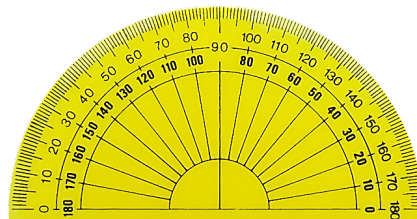
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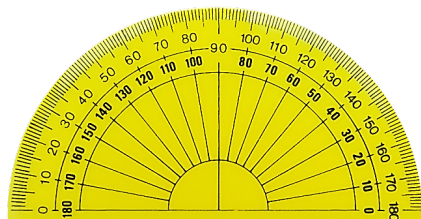
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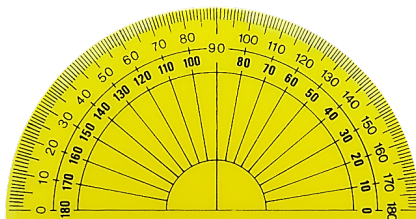
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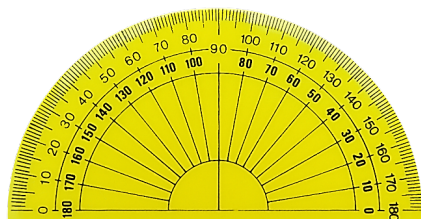
12b
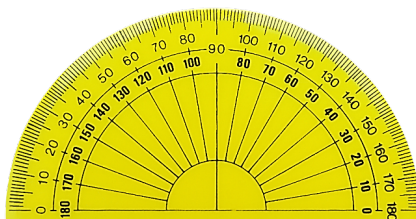
Arithmetic

| **1.** 3.04 + 3.07 | **2.** 63 ÷ 100 | **3.** 7,200 ÷ 90 | **4.** 3,688 ÷ 4 |

Practice: Draw angles up to 180°

5. Recap: A straight line is ?°.

A right angle is ?°.

Halfway between 0° and 90° is ?°.

6. Draw lines measuring:

a. 3cm 7mm   b. 7.3cm   c. 30mm

7. Draw angles showing:

a. 10°   b. 85°   c. 134°

8. Draw angles showing:

a. 94°   b. 29°   c. 175°

9. Draw an angle between:

a. 140° and 180°   b. 30° and 50°

c. 110° and 120°

10. Explain how you would draw an angle of approximately 100° without a protractor.

11. Draw angles:

a. 75° with a line 5cm long

b. 146° with a line 8.5cm long

12. Draw angles:

a. 95° with a line 2cm long

b. 162° with a line 4.3cm long

13. Anita says she has drawn an angle showing 70°. Without a protractor, can you tell if she is correct?
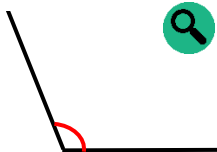
Challenge

14. Without using a protractor draw these angles.

a. less than 90°

b. between 135° and 180°

c. between 45° and 110°

d. between 80° and 120°

You might want to talk to an adult

Spot the mistake

Answers

Q no.	Question	Answer
1	3.04 + 3.07	6.11
2	63 ÷ 100	0.63
3	7,200 ÷ 90	80
4	3,688 ÷ 4	922
5	A straight line is ?°. A right angle is ?°. Halfway between 0° and 90° is ?°.	180°, 90°, 45°
6	Draw lines measuring:	Lines to be drawn accurately.
7	Draw angles showing:	Angles should be drawn on the protractors page accurately.
8	Draw angles showing:	Angles should be drawn on the protractors page accurately.
9	Draw an angle between:	Accept accurately drawn angles between degrees stated.
10	Explain how you would draw an angle of approximately 100° without a protractor.	Answers will vary for this answer. You would expect pupils to identify that 100° is close to 90° and that they could use this information to estimate the angle.
11	Draw angles:	Accept answers that display the correct angle and have the accurate length lines.
12	Draw angles:	Accept answers that display the correct angle and have the accurate length lines.
13	Anita says she has drawn an angle showing 70°. Without a protractor, can you tell if she is correct?	The angle she has drawn is an obtuse angle. As 70° is an acute angle, she is incorrect.
14	Without using a protractor draw these angles.	Pupils need to use their understanding of angles to draw the angles accurately. All of the given measures work with an understanding of how to find 90° and half a right angle (45°). Accept answers that are roughly accurate.

Arithmetic

1. 176 – 100

2. 4^3

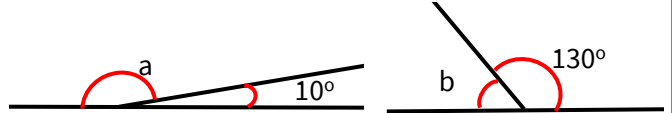**3.** 55 x 3

4. 80 + 110

Practice: Calculating Angles on a Straight Line

5. Recap: How many right angles make a line?
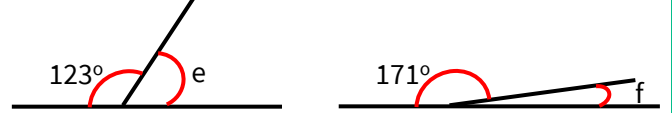A straight line is ? degrees.
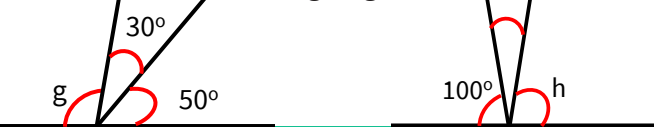
6. Calculate the missing angles.

a   10°   b   130°
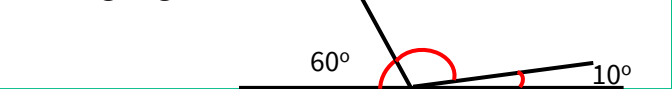
7. Calculate the missing angles.

c   80°   d   39°

8. Calculate the missing angles.

123°   e   171°   f

9. Calculate the missing angles.

30°   20°   g   50°   100°   h

10. Explain how you would find this missing angle.

60°   10°

11. Calculate the missing angles.

i   27°   63°   j   19°   87°

12. Calculate the missing angles.

l   k   14°   87°
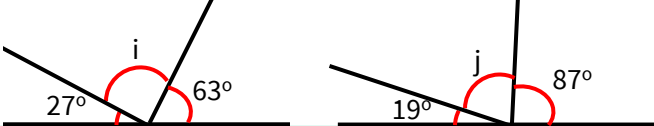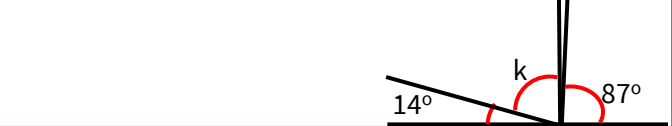
13. Mathias says angle m is 170°. Is Mathias correct?

10°   m

14. Angle n is a multiple of 3 between 50° and 61°.

Give 4 possible values for angle n and p

p   n

You might want to talk to an adult

Spot the mistake

Challenge

Answers

Q no.	Question	Answer
1	176 – 100	76
2	4³	64
3	55 x 3	165
4	80 + 110	190
5	How many right angles make a line? A straight line is ? degrees.	2 right angles make a straight line. A straight line is 180°.
6	Calculate the missing angles.	a. 170°, b. 50°
7	Calculate the missing angles.	c. 100°, d. 141°
8	Calculate the missing angles.	e. 57°, f. 9°
9	Calculate the missing angles.	g. 100°, h. 60°
10	Explain how you would find this missing angle.	Pupils will have different methods to find the missing angles. Most will describe adding the given degrees together (70°) and subtracting the total from 180°. The missing angle would measure 110°.
11	Calculate the missing angles.	i. 90°, j. 74°
12	Calculate the missing angles.	k. 76°, l. 3°
13	Is Mathias correct?	Mathias has not understood that 90° is often marked with a square, not a number. He has therefore found 180° - 10° instead of 180° - 100°. The correct answer is m = 80°.
14	Angle n is a multiple of 3 between 50° and 61°. Give 4 possible values for angle n and p	n = 51° and p = 129° n = 54° and p =126° n = 57° and p = 123° n = 60° and p =120°

Arithmetic

1. 7.13 + 1.05

2. 4,213 + 3,168

3. $\frac{4}{10}$ of 70

4. 30,000 – 9

Practice: Calculating Angles Around a Point

5. Recap: There are ? degrees in a right angle, ? right angles in a full turn, so ? degrees in a full turn.

6. Calculate the missing angle.

150º

a

7. Calculate the missing angle.
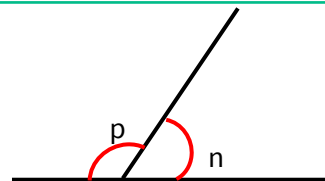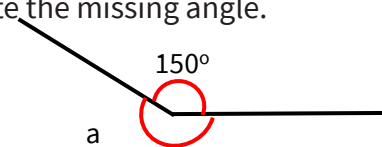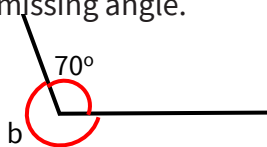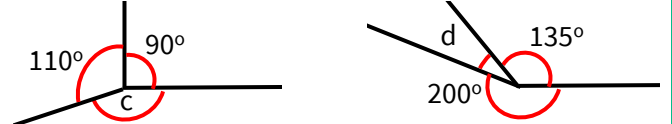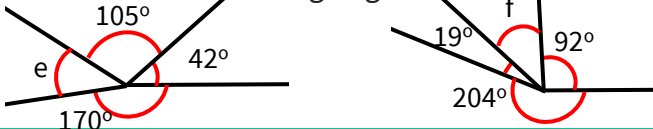
70º

b

8. Calculate the missing angles.

110º   90º

c

d   135º

200º

9. Calculate the missing angles.

105º

e

42º

170º

f

19º   92º

204º

10. Vertically opposite angles are always:

equal, unequal.

Explain.

11. Calculate the missing angles.
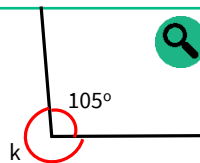
g

80º   80º

h

105º   i   105º

j

12. Calculate the missing angle.

x

13. Anais says the missing angle is 165º.

Is Anais correct? Explain.

105º

k

14. Without using a protractor, calculate the missing angles.

b   a

120º   70º

c

Explain how you found the missing angles.

You might want to talk to an adult

Spot the mistake

Challenge

Answers

Q no.	Question	Answer
1	7.13 + 1.05	8.18
2	4,213 + 3,168	7,381
3	$\frac{4}{10}$ of 70	28
4	30,000 – 9	29,991
5	There are ? degrees in a right angle, ? right angles in a full turn, so ? degrees in a full turn.	90, 4, 360
6	Calculate the missing angle.	a. 210°
7	Calculate the missing angle.	b. 290°
8	Calculate the missing angles.	c. 160°, d. 25°
9	Calculate the missing angles.	e. 43°, f. 45°
10	Vertically opposite angles are always: equal, unequal. Explain.	Vertically opposite angles are created when two lines cross. Vertically opposite angles are always equal.
11	Calculate the missing angles.	g. 100°, h. 100°, i. 75°, j. 75°
12	Calculate the missing angles.	k. 36°
13	Anais says the missing angle is 165°. Is Anais correct? Explain.	Anais is incorrect. She has used 270° as a full circle instead of 360°. The correct answer is 255°.
14	Without using a protractor, calculate the missing angles. Explain how you found the missing angles.	a = 50° b = 60° c = 60° Pupils can find b as 120° + b make a straight line (180°). b and c are vertically opposite angles so equal the same. To find a there are several methods that could be used, as 70° + a are vertically opposite to 120°, they will total 120°. Alternatively, c + 70° + a = 180° and 70° + a + b = 180°.