

Homework

Drawing Lines and Angles Accurately

Teaching note:

Please note that precise measurements are dependent upon printer settings.

National Curriculum Objectives:

Mathematics Year 5: (5G4c) Draw given angles, and measure them in degrees.

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)

Developing Draw a line to meet another at a given angle. One line is horizontal and both are multiples of 5mm; angles are acute or obtuse and multiples of 5° .

Expected Draw two lines that meet at a given angle. One line is horizontal and both are multiples of 1mm; angles are acute or obtuse and multiples of 1° .

Greater Depth Draw two lines that meet at a given angle. Neither line is horizontal and both are multiples of 1mm; angles are acute or obtuse and multiples of 1° .

Questions 2, 5 and 8 (Varied Fluency)

Developing Draw lines and angles to represent a given journey. One horizontal line provided. Lines are multiples of 5mm; angles are acute or obtuse and multiples of 5° .

Expected Draw lines and angles to represent a given journey. One horizontal line provided. Lines are multiples of 1mm; angles are acute or obtuse and multiples of 1° .

Greater Depth Draw lines and angles to represent a given journey. No lines provided. Lines are multiples of 1mm; angles are acute or obtuse and multiples of 1° .

Questions 3, 6 and 9 (Reasoning and Problem Solving)

Developing Join dots to create a pair of intersecting lines at a given angle. One horizontal line provided. Lines are multiples of 5mm; angles are acute or obtuse and multiples of 5° .

Expected Join dots to create a pair of intersecting lines at a given angle. One diagonal line provided. Lines are multiples of 1mm; angles are acute or obtuse and multiples of 1° .

Greater Depth Join dots to create a pair of intersecting lines at a given angle. No lines provided. Lines are multiples of 1mm; angles are acute or obtuse and multiples of 1° .

Drawing Lines and Angles Accurately

1. Draw a line which meets the criteria below.

Measures 35mm

Meets the line below at 20°



VF
HW/Ext

2. Will walked to the bakery.

- First, he walked 8.5km.
- Next, he turned 40° .
- Then, he walked a further 2.5km.

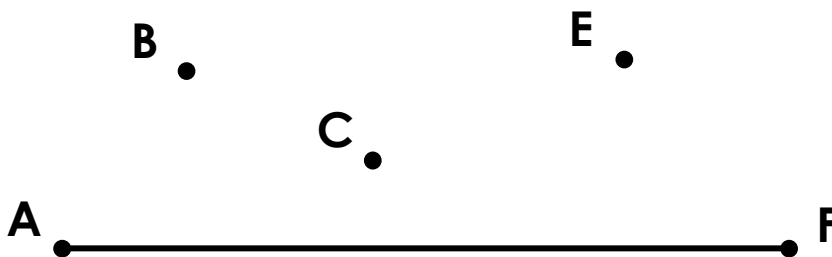
Draw an angle to represent his journey, where 1km = 1cm.

One line has been done for you.



VF
HW/Ext

3. Join two dots to make a line that intersects the line below to create an angle of 120° .



How long is the line you have drawn? D



RPS
HW/Ext

Drawing Lines and Angles Accurately

4. Draw two lines which meet the criteria below.

A horizontal line that is 54mm

A second line that is 4.1 cm

They meet at 75°



VF
HW/Ext

5. Maxine walked to the shop.

- First, she walked 4.7km.
- Next, she turned 43° .
- Then, she walked a further 2.6km.

Draw an angle to represent her journey, where 1km = 1cm.

One line has been done for you.



VF
HW/Ext

6. Draw a line joining A to E. Then join two other dots to make a line that intersects it to create an angle of 62° .

A •

C •

F •

B •

E •

D •

How long is the line you have drawn?



RPS
HW/Ext

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7. Draw two lines which meet the criteria below.

A line that is 27mm

A second line that is 3.8cm

Neither horizontal or vertical

They meet at 24°



VF
HW/Ext

8. Dustin walked to the book shop.

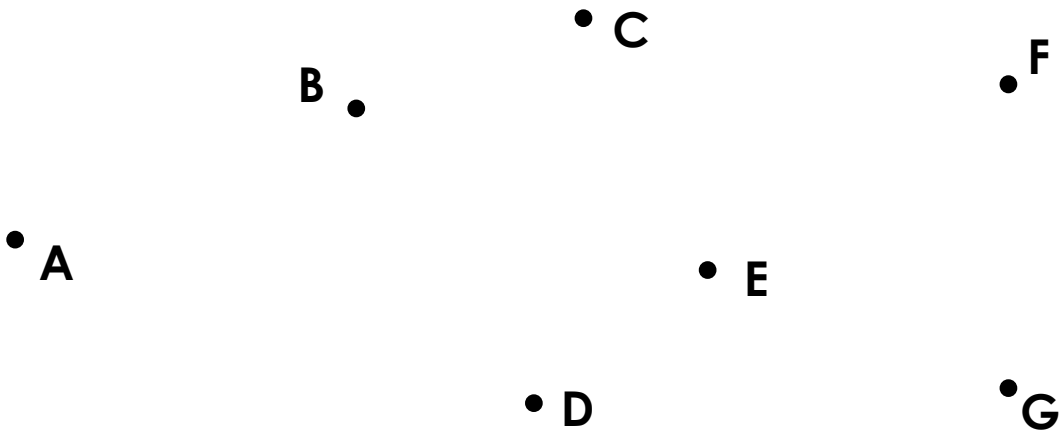
- First, he walked 4.9km.
- Next, he turned 26° .
- Then, he walked a further 5.2km.

Draw an angle to represent his journey, where 1km = 1cm.



VF
HW/Ext

9. Join dots to make two lines that intersect to create an angle of 73° .



How long are the lines you have drawn?



RPS
HW/Ext



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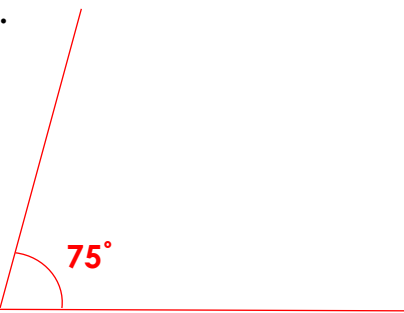

Teaching note:

The answers below are provided as an example. Teachers will need to measure angles and lines when marking. Accept angles and lines of various orientation.

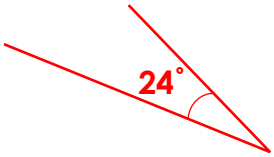
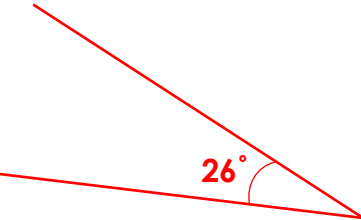
Developing

- 
- 
- B and D; 6.5cm**

Expected

- 
- 
- C and D; 5.7cm**

Greater Depth

- 
- 
- B and E, C and D; 5.3cm each**