

1) Which value is not equal to  $1/3$ ?

A	$3 \div 9$
B	$(2/3) \div 2$
C	0.3
D	$14/42$

2)  $(5b + 90) \div 6 = 17$   
What is the value of  $b$ ?

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3) Jill has taken 7 tests. Her average test score is 32.  
She scores 0 in her eighth test.  
What is her new average test score?

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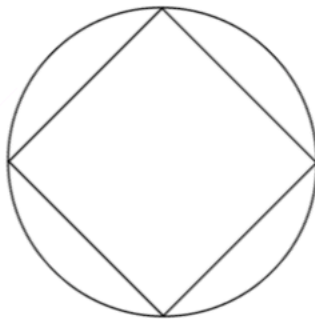
4) Which of the following is less than -65.453 but greater than -66.021?

A	-66.134
B	-65.382
C	-65.909
D	-66.021

- 5) Rachel is at a restaurant. There are 3 choices for starter, 4 choices for main and 5 choices for dessert.  
If Rachel eats all three courses, how many different combinations could she choose?

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- 6) A square is inscribed in a circle with radius  $r$ .  
What is the area of the square in terms of  $r$ ?



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- 7) The perimeter of an irregular octagon is 56.4 cm.  
The length of seven of its sides is given below.  
What is the length of Side 8?

Side 1	2.77 cm
Side 2	13.22 cm
Side 3	4.9 cm
Side 4	5.91 cm
Side 5	16.29 cm
Side 6	1.39 cm
Side 7	6.54 cm
Side 8	?

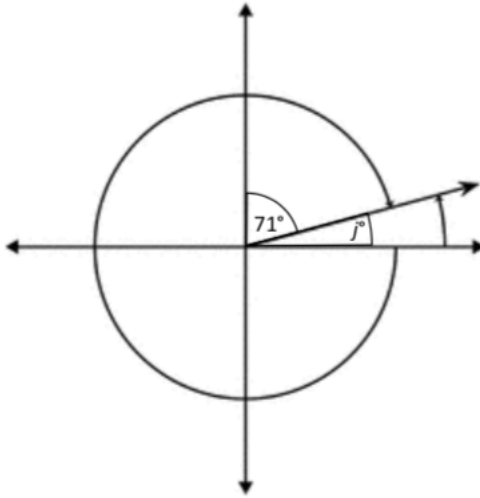
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8) It costs  $g$  pounds to buy 7 oranges.

Which expression shows how many pounds it costs to buy 25 oranges?

A	$g \div 25 + 7$
B	$25g \div 7$
C	$g(25 \div 7)$
D	$175g$

9)



What is the value of  $j$ ?

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10) Bob went on a run. He ran 200 m in the first minute. After the next minute, he had run a total of 400 m. After the third minute, he had run a total of 600 m.

If the pattern continued, how many km did he run in half an hour?

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- 11) A map is drawn on a scale of 1:2,500,000.  
A road on the map is 2.5 cm long.  
What is the actual length of the road in km?

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- 12) A ladder is placed on flat ground and against the vertical wall of a building.  
The angle between the ladder and the wall is  $31^\circ$ .  
What is the angle between the ladder and the flat ground?

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- 13) The price of a book decreased from £8 to £5.  
What was the percentage decrease in price?

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14)  $x^3 - x^2 = y$

For what value of  $x$  does  $y$  equal 48?

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15) Each year, the value of a painting increases by 10% compared to its value in the previous year.

In Year 1, the value of the painting is £1,000.

In Year 2, the value of the painting is £1,100.

What is the value of the painting in Year 3?

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16)  $5/7 = 35/u$

$3u + 7 = p$

What is the value of  $p$ ?

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17) Calculate the obtuse angle between the hour and minute hands on the clock below.



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18) Each of the four large squares in Figure 1 below has an area of  $64 \text{ cm}^2$ .  
The perimeter of Figure 1 is  $72 \text{ cm}$ .  
What is the area of the shaded square?

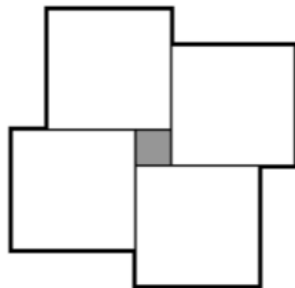


Figure 1

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19)  $(5.76 - 3.45)y = y$   
What is the value of  $y$ ?

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- 20) The coordinates of four corners of a rectangle are  $(1, 7)$ ,  $(1, 13)$ ,  $(9, 7)$  and  $(9, 13)$ .  
What are the coordinates of the centre-point of the rectangle?

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