# Assessment 3F: Units 9 - 11

Questions 1 – 12 are multi-choice questions .You only need to indicate the correct answer but you made need rough paper to help your thinking.

1. The probability of winning a game is 0.7. If you played the game 50 times, roughly how many times would you expect to win?

| A | B | C | D |
|---|---|---|---|
| 7 | 15 | 35 | 43 |

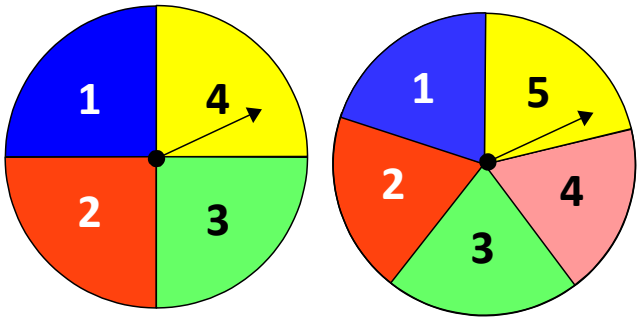
2. A box contains 60 cubes. If one cube is chosen at random, the probability of getting a certain colour is given in the table below.

| Red | Blue | Green | Yellow |
|---|---|---|---|
| 0.4 | 0.3 | 0.2 | 0.1 |

How many green cubes are in the box?

| A | B | C | D |
|---|---|---|---|
| 6 | 12 | 18 | 24 |

3. You spin these two spinners at the same time.
What is the probability of scoring a total of 7 when you add the scores together?



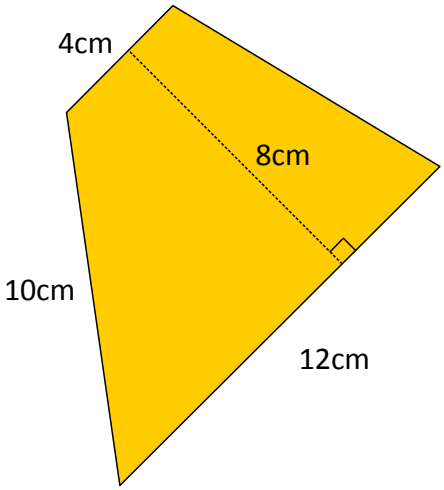

| + | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 2 | 3 | 4 | 5 | 6 | 7 |
| 3 | 4 | 5 | 6 | 7 | 8 |
| 4 | 5 | 6 | 7 | 8 | 9 |

| A | B | C | D |
|---|---|---|---|
| $\frac{4}{9}$ | $\frac{3}{20}$ | $\frac{7}{20}$ | $\frac{2}{9}$ |

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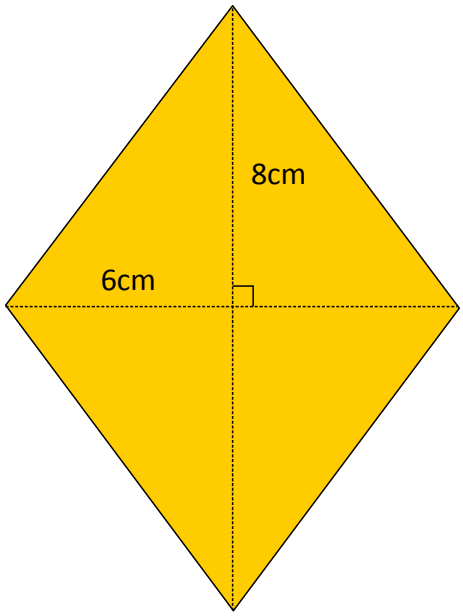
4. What is the area of this trapezium?

| A | B | C | D |
|---|---|---|---|
| $64cm^2$ | $80cm^2$ | $34cm^2$ | $128cm^2$ |



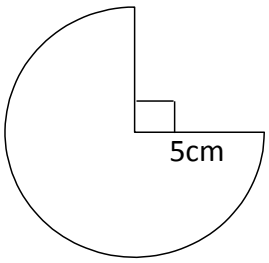

5. What is the area of the rhombus?

| A | B | C | D |
|---|---|---|---|
| $14cm^2$ | $48cm^2$ | $96cm^2$ | $192cm^2$ |



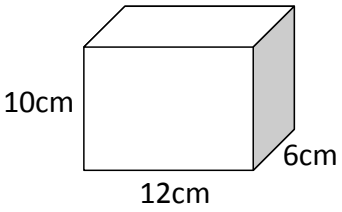

6. What is the area of this shape (to 1 dp)

| A | B | C | D |
|---|---|---|---|
| $58.9cm^2$ | $59.0cm^2$ | $78.5cm^2$ | $78.6cm^2$ |



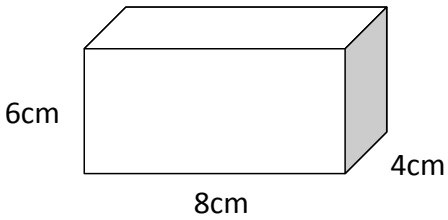
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7. What is the surface area of this cuboid?

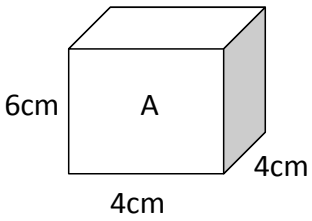


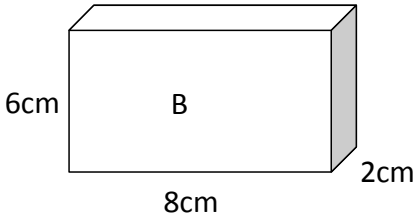

| A | B | C | D |
|---|---|---|---|
| $720cm^2$ | $252cm^2$ | $504cm^2$ | $432cm^2$ |

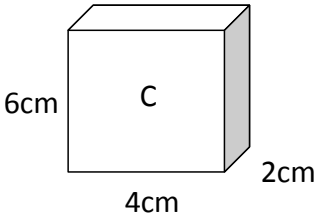
8. Evie has to design a cuboid that will have $\frac{1}{4}$ of the volume of cuboid shown here.

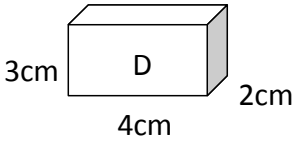



Which of these would be an appropriate model?

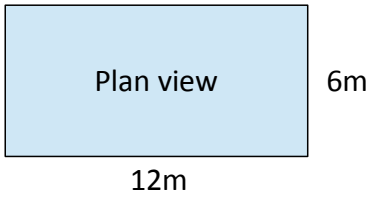


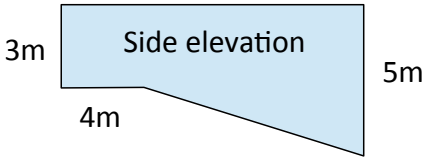




9. What is the capacity of this aquarium in litres?




| A | B | C | D |
|---|---|---|---|
| 264L | 360L | 36000L | 26400L |

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10. Dillon, Emily and Freda share out their chocolates in the ratio 3 : 4 : 5. If Emily gets 20 chocolates, how many do they have altogether?

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| A | 60 | B | 48 | C | 40 | D | 240 |

11. The ratio of girls to boys in 7Z is 3 : 4. Which of these numbers can not be the number of pupils in 7Z?

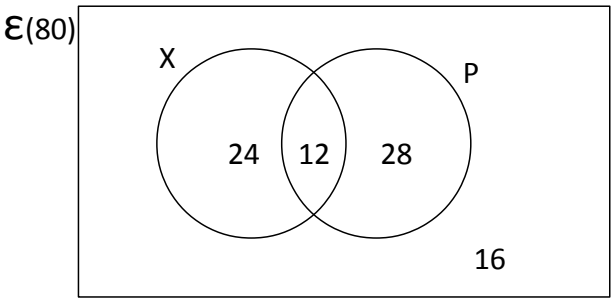
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| A | 21 | B | 27 | C | 28 | D | 35 |

12. Write the ratio of 60p to £1.50 in its simplest form.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| A | 60 : 150 | B | 6 : 15 | C | 0.6 : 1.5 | D | 2 : 5 |

In Questions 13 – 15, you must show your working where appropriate.

13. 80 pupils were asked if they had an Xbox(X) or a PlayStation (P). This information is shown on the Venn diagram opposite.




What is the probability that a pupil chosen at random

a) Has both an Xbox and a PlayStation?

.....

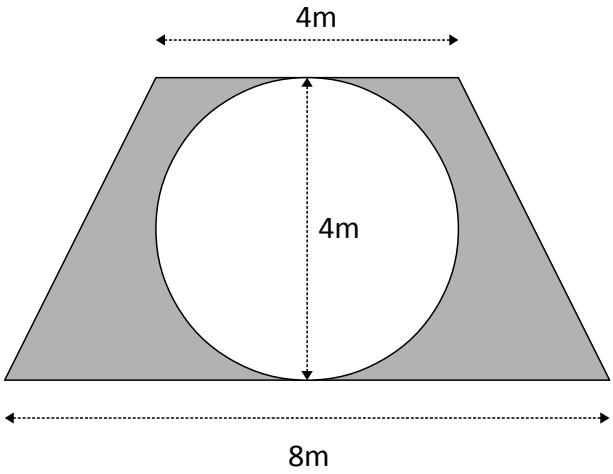
b) Does not run have a Playstation?

.....

c) Has an Xbox but doesn't have a PlayStation?

.....

14. Calculate the shaded area in this diagram. You must show your working.
Give your answer to 1 d.p.




15. The ratio of yellow PE shirts to white PE shirts sold in a uniform shop is 3 : 7. If the shop sold 48 more white shirts than yellow shirts, how many yellow shirts did they sell?

**Mark scheme**

12 multi-choice questions – 1 mark each

Questions 13 – 15, 3 marks each.

Maximum marks 21.

Multi-choice answers

| | | | | | |
|---|---|---|---|---|---|
| 1 | C | 5 | C | 9 | D |
| 2 | B | 6 | A | 10 | A |
| 3 | B | 7 | C | 11 | B |
| 4 | A | 8 | C | 12 | D |

13. 1 mark for each correct answer

a) $\frac{12}{80}$ or $\frac{3}{20}$

b) $\frac{52}{80}$ or $\frac{13}{20}$

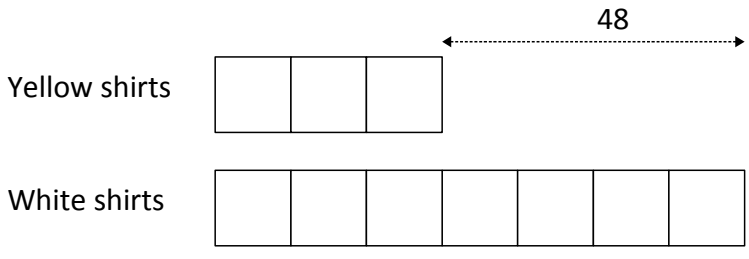
c) $\frac{24}{80}$ or $\frac{6}{20}$ or $\frac{3}{10}$

14. Area of the trapezium = $24m^2$ (1 mark for 24 seen)

Area of circle = $50.24m^2$ (1 mark for 50.2 or better)

Shaded area = $50.24 – 24 = 20.2m^2$ (1 mark – must be 1d.p.)

15. Useful diagram (1 mark)




48÷4 = 12 (1 mark – seen or implied)

3 x 12 = 36 yellow shirts sold (1 mark)