Name			
Class	A	Term	3
Year	8	Quiz Number:	3

1. (a) Write in standard form   35000

(2)

...............3.5×10^4...........

(b) Write as an ordinary number 1.2×10^3

................1200.........

2. (a) Write in standard form   0.00079

7.9×10^{-4}
....

(b) Write as an ordinary number 4.7×10^{-2}

..........0.047...............

3. Circle the rational numbers

(1)

π

$\sqrt{9}$

0.1111....

$\sqrt{2}$

4

⅓

4. x is an irrational number between 7 and 10. Find a value for x.
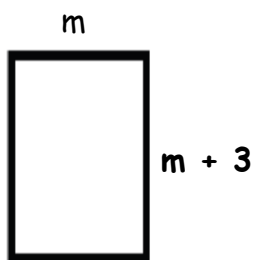
Answers may vary, Ex. $\sqrt{56}, \sqrt{63}, \sqrt{70}, \sqrt{72}, \sqrt{90}$.

5. Write an algebraic expression for each of the following

x multiplied by 2 and then add 3

(1)

2x + 3

6. Write an expression for the perimeter of the shape below.

m

m + 3

4m + 6   (1)

7. If $x = 6$ and $y = -2$, find the value of

(a) x^2

36

....
(1)

(b) $5x + y$

28

....

8. Work out the volume of this cylinder.

(2)

5 mm ÷ 10 = 0.5 cm

$$V = \pi r^2 h$$

5mm

2cm
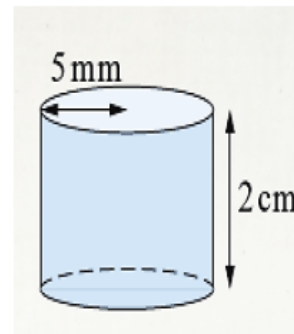
Volume = 1570 mm³ or 1.57 cm³

9. Here is a cuboid.

What is the total surface area of the cuboid? State the units with your answer.

Diagram NOT accurately drawn

(2)

5 cm

6 cm

10 cm
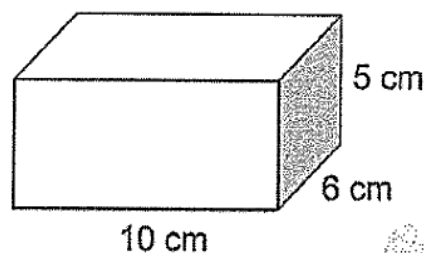
10. Simplify the following:

2(LW + WH + HL) = 2(60 + 30 + 50) = 280 cm²

(a)

$8p^4 \times 4p^8$

$32\,p^{12}$ (1)

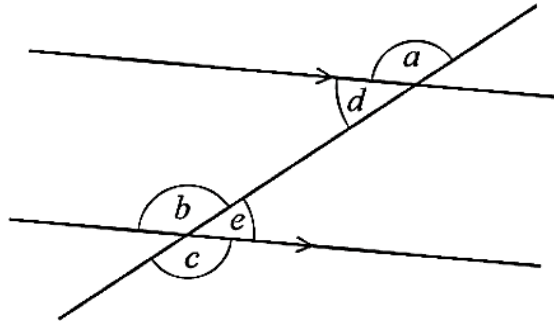**(b)** $16f^7g^2 \div 4f^3g$

$4f^4g$ (1)

(c) $(3y^3)^3$

$(3)^3(y^3)^3 = 27\,y^9$ (1)

11. a.

The diagram shows a pair of parallel lines with a straight line crossing them and some angles marked with letters.
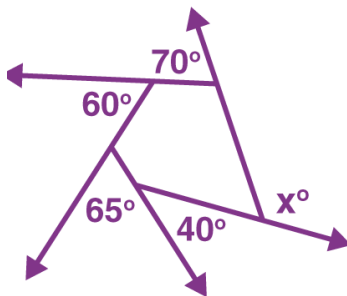
(3)

Complete these sentences with the correct letters.

Angles ......**d**...... and ......**e**...... are alternate angles.

Angles ......**b**...... and ......**a**...... are corresponding angles.

Angles ......**b**...... and ......**c**...... are vertically opposite angles.

b. Find the value of x

(1)

360 – (70 + 60 + 65 + 40)

= 360 – 235

= 125°

X = 125°

4

12. Complete:

(a) The area of the shaded region = ...| 106 |....... m^2 (2)
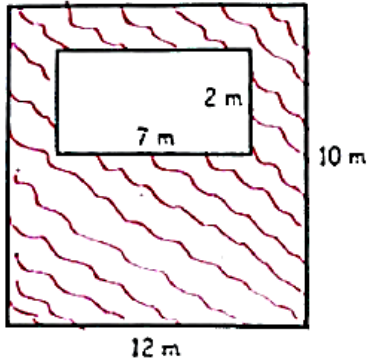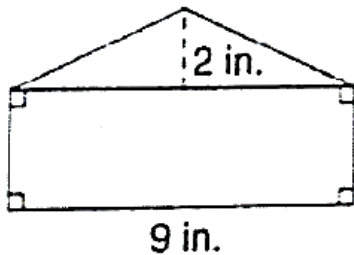
$A = L \times w$

$12 \times 10 = 120$

$7 \times 2 = 14$

Area of the shaded part = $120 - 14$

$= 106$

(b) The area of the polygon = ... | 36 |.......... in^2 (2)

Area of $\triangle = \frac{1}{2} BH = \frac{1}{2} \times 9 \times 2 = 9$ in

3 in. Area of $\square = L \times w = 9 \times 3 = 27$

Total area $= 27 + 9 = 36$ in^2

13. Complete with the right answer: (2)

a) We can find the sum of the interior angles of any polygon using the rule

(n − 2) × 180°

b) Workout the sum of interior angles of a polygon with 9 sides **1260**

Total Marks	
	25

5