

FOCUS 4 TASKS - Set 3

Each of the 30 topics is covered once within the 5 sheets

Sheet 3A

| | |
|-------------------|----|
| Compound Measures | Q1 |
| Rotations | Q2 |
| Linear equations | Q3 |
| Translations | Q4 |
| Index Laws | Q5 |
| Scatter Graphs | Q6 |

Sheet 3B

| | |
|----------------------|----|
| Two Way Tables | Q1 |
| Equivalence | Q2 |
| Circles | Q3 |
| Proportion | Q4 |
| Straight Line Graphs | Q5 |
| Expand and Simplify | Q6 |

Sheet 3C

| | |
|-------------------------------------|----|
| Estimation | Q1 |
| Averages from a Table | Q2 |
| Use of Calculator (inc percentages) | Q3 |
| Sequences - nth term | Q4 |
| Standard Form | Q5 |
| Enlargements | Q6 |

Sheet 3D

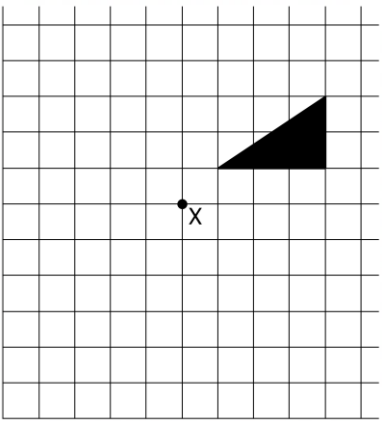
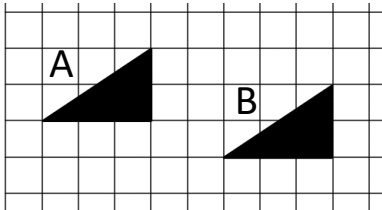
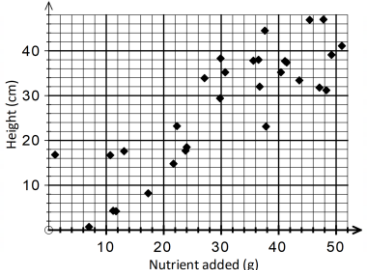
| | |
|------------------------------------|----|
| Plans and Elevations | Q1 |
| Expanding Double Brackets | Q2 |
| Pythagoras | Q3 |
| Exchange Rates | Q4 |
| Alternate and Corresponding Angles | Q5 |
| Volume | Q6 |

Sheet 3E

| | |
|----------------------------|----|
| Probability from a Table | Q1 |
| Product of Prime Factors | Q2 |
| Reflections | Q3 |
| Trigonometry | Q4 |
| Averages from Grouped Data | Q5 |
| Inequalities | Q6 |

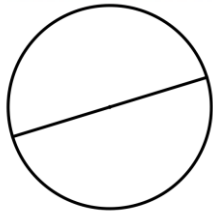
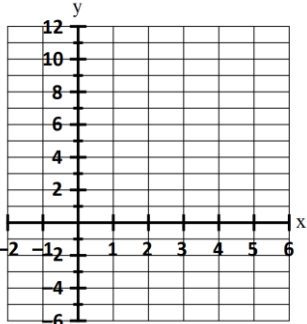
SKILLS CHECK

| | | |
|-------------------|---|---|
| 1) $647 + 286 =$ | 2) $5833 - 2414$ | 3) 65.5×2.5 |
| 4) $4860 \div 15$ | 5) $\frac{5}{6} + \frac{3}{4}$ | 6) 0.9×0.4 |
| 7) 37.5% of £480 | 8) On a map 400 km is represented by 10 cm. Find the scale of the map | 9) A prize is divided in the ratio 5:2. One share is £165 more than the other what is the total amount? |

| QUESTION 1 | QUESTION 2 | QUESTION 3 |
|---|---|---|
| <p>A block has a mass of 250g. If it has a density of 0.5g/cm^3 calculate the volume of the block</p> | <p>Rotate the triangle 90° anti-clockwise about point X</p>  | <p>Solve</p> $4x - 5 = 2x + 11$ |
| QUESTION 4 | QUESTION 5 | QUESTION 6 |
| <p>Describe fully the single transformation which maps A onto B</p>  | <p>Simplify</p> $(2a^2b^3)^4$ | <p>The graph shows the height of plants after different quantities of nutrients are given.</p>  <p>Draw a line of best fit.</p> <p>Estimate the height of plant which received 34g of the nutrient</p> |

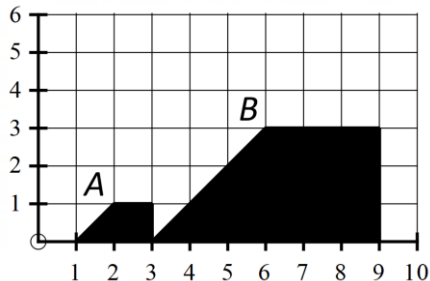
SKILLS CHECK

| | | |
|-------------------|---|--|
| 1) $528 + 628 =$ | 2) $2069 - 987$ | 3) 50.5×2.4 |
| 4) $3000 \div 24$ | 5) $\frac{3}{4} + \frac{4}{7}$ | 6) 0.6×0.7 |
| 7) 17.5% of £420 | 8) On a map 120 km is represented by 10 cm. Find the scale of the map | 9) A prize is divided in the ratio 5:2. One share is £30 more than the other what is the total amount? |

| QUESTION 1 | QUESTION 2 | QUESTION 3 | | | | | | | | | | | | | | | | | | | | |
|---|---|-------------------|-------|-------|-------|------|--|--|--|--|------|--|--|--|--|-------|--|--|--|--|--|--|
| <p>A hockey team played 40 games. 23 of the games were at home and the rest away. The team won 18 of the games. They drew 5 home games. 3 of the 12 games they lost were at home.</p> <p>Complete the 2 way table</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Won</th> <th>Lost</th> <th>Drawn</th> <th>Total</th> </tr> </thead> <tbody> <tr> <th>Home</th> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <th>Away</th> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <th>Total</th> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> | | Won | Lost | Drawn | Total | Home | | | | | Away | | | | | Total | | | | | <p>Express 85% as a fraction in its lowest form</p> <p>Express $\frac{11}{50}$ as a decimal</p> | <p>Calculate the area of the circle</p> <div style="text-align: center;">  <p>diameter = 14 cm</p> </div> |
| | Won | Lost | Drawn | Total | | | | | | | | | | | | | | | | | | |
| Home | | | | | | | | | | | | | | | | | | | | | | |
| Away | | | | | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | | | | | |
| QUESTION 4 | QUESTION 5 | QUESTION 6 | | | | | | | | | | | | | | | | | | | | |
| <p>A recipe serving 6 people used 1 kg of mince. How much mince would be needed to make the recipe for 15 people?</p> | <p>Complete the table of values for $y = 2x - 3$</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>x</td> <td>-1</td> <td>0</td> <td>3</td> </tr> <tr> <td>y</td> <td></td> <td></td> <td></td> </tr> </table> <div style="text-align: center;">  </div> | x | -1 | 0 | 3 | y | | | | <p>Expand and simplify $4(x - 2) + 3(2x + 1)$</p> | | | | | | | | | | | | |
| x | -1 | 0 | 3 | | | | | | | | | | | | | | | | | | | |
| y | | | | | | | | | | | | | | | | | | | | | | |

SKILLS CHECK

| | | |
|-------------------|---|--|
| 1) $529 + 582 =$ | 2) $6305 - 2794$ | 3) 0.28×14.5 |
| 4) $8540 \div 35$ | 5) $\frac{3}{5} + \frac{3}{4}$ | 6) 0.1×0.9 |
| 7) 20.5% of £9000 | 8) On a map 100 km is represented by 10 cm. Find the scale of the map | 9) A prize is divided in the ratio 6:5. One share is £90 more than the other what is the total amount? |

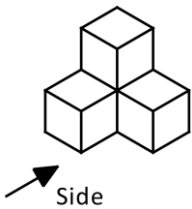
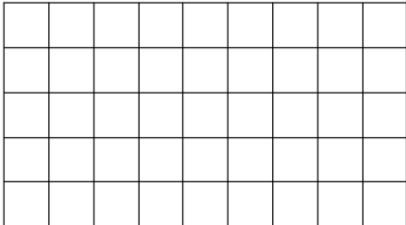
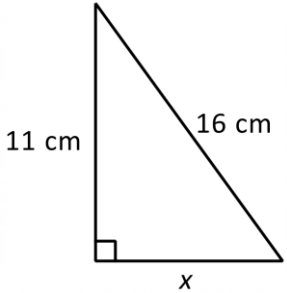
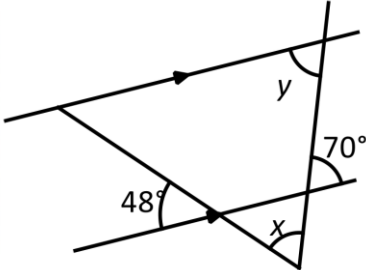
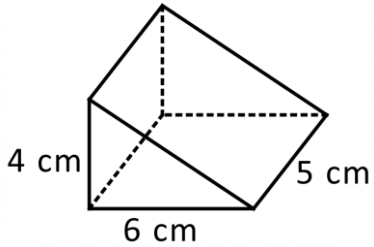
| QUESTION 1 | QUESTION 2 | QUESTION 3 | | | | | | | | | | | | | | |
|---|--|--|---|----|---|----|---|----|---|----|----|----|---|----|---|--|
| Estimate $\frac{\sqrt{66.3+25.9}}{0.456}$ | Calculate the mean <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>x</th> <th>f</th> </tr> </thead> <tbody> <tr><td>10</td><td>4</td></tr> <tr><td>11</td><td>5</td></tr> <tr><td>12</td><td>9</td></tr> <tr><td>13</td><td>11</td></tr> <tr><td>14</td><td>6</td></tr> <tr><td>15</td><td>5</td></tr> </tbody> </table> | x | f | 10 | 4 | 11 | 5 | 12 | 9 | 13 | 11 | 14 | 6 | 15 | 5 | Work out 2.5% of £625 $(2.5 \times 10^4) \div (5 \times 10^2)$ |
| x | f | | | | | | | | | | | | | | | |
| 10 | 4 | | | | | | | | | | | | | | | |
| 11 | 5 | | | | | | | | | | | | | | | |
| 12 | 9 | | | | | | | | | | | | | | | |
| 13 | 11 | | | | | | | | | | | | | | | |
| 14 | 6 | | | | | | | | | | | | | | | |
| 15 | 5 | | | | | | | | | | | | | | | |
| QUESTION 4 | QUESTION 5 | QUESTION 6 | | | | | | | | | | | | | | |
| Find the nth term of 6, 11, 16, 21, ... Find the value of the 100 th term | Express in standard form 401000000 0.0000011 | Describe fully the single transformation that maps shape A onto shape B  | | | | | | | | | | | | | | |

FOCUS 4 TASK 3D

NAME

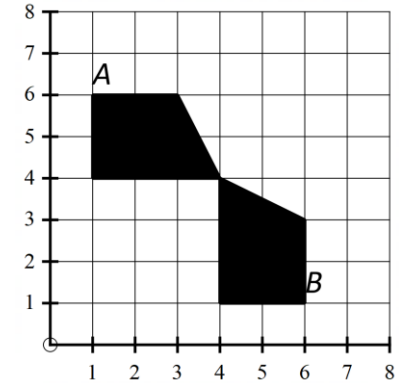
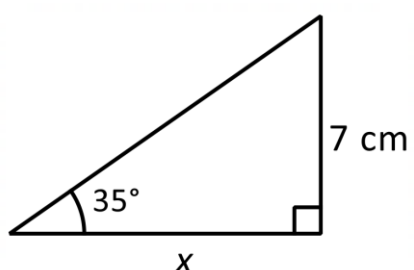
SKILLS CHECK

| | | |
|-------------------|---|--|
| 1) $398 + 498 =$ | 2) $5202 - 1583$ | 3) 10.7×2.7 |
| 4) $4064 \div 32$ | 5) $\frac{2}{3} + \frac{1}{2}$ | 6) 0.3×0.8 |
| 7) 2.5% of £360 | 8) On a map 250 km is represented by 10 cm. Find the scale of the map | 9) A prize is divided in the ratio 5:8. One share is £18 more than the other what is the total amount? |

| | | |
|---|--|--|
| QUESTION 1 | QUESTION 2 | QUESTION 3 |
| <p>Draw the side elevation and plan view</p>   | <p>Expand and simplify $(x - 3)(x - 9)$</p> | <p>Calculate x correct to 1 d.p.</p>  |
| QUESTION 4 | QUESTION 5 | QUESTION 6 |
| <p>If the exchange rate is $\pounds 1 = \\$1.60$ Work out the missing values</p> <p>a) $\\$568 = \pounds \dots\dots\dots$</p> <p>b) $\pounds 52 = \\$ \dots\dots\dots$</p> | <p>Calculate x and y</p>  | <p>Calculate the volume</p>  |

SKILLS CHECK

| | | |
|-------------------|---|---|
| 1) $703 + 138 =$ | 2) $6335 - 5268$ | 3) 2.4×21.5 |
| 4) $9600 \div 80$ | 5) $\frac{2}{3} + \frac{3}{4}$ | 6) 0.8×0.9 |
| 7) 12.5% of £480 | 8) On a map 220 km is represented by 10 cm. Find the scale of the map | 9) A prize is divided in the ratio 3:4. One share is £30 more than the other what is the total prize? |

| QUESTION 1 | QUESTION 2 | QUESTION 3 | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|----------------|---------------|------|-------------|-----------------|----|---------------|--|--|----|--|--|------------------|----|--|--|-------------------|----|--|--|--------------------|----|--|--|--|
| <p>The table shows probability of a team drawing a game. The team has an equal probability of winning or losing</p> <table border="1"> <tr> <th>Result</th> <th>Win</th> <th>Lose</th> <th>Draw</th> </tr> <tr> <td>Probability</td> <td></td> <td></td> <td>$\frac{1}{4}$</td> </tr> </table> <p>Calculate the probability that the team wins a game</p> <p>Calculate the probability that the team does not win the game</p> | Result | Win | Lose | Draw | Probability | | | $\frac{1}{4}$ | <p>Express 120 as a product of prime factors</p> | <p>Describe fully the single transformation that maps A onto B</p>  | | | | | | | | | | | | | | | | |
| Result | Win | Lose | Draw | | | | | | | | | | | | | | | | | | | | | | | |
| Probability | | | $\frac{1}{4}$ | | | | | | | | | | | | | | | | | | | | | | | |
| QUESTION 4 | QUESTION 5 | QUESTION 6 | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Calculate x correct to 1 d.p.</p>  | <p>Calculate an estimate of the mean time</p> <table border="1"> <tr> <th>Time (seconds)</th> <th>f</th> <th></th> <th></th> </tr> <tr> <td>$0 \leq t < 30$</td> <td>13</td> <td></td> <td></td> </tr> <tr> <td>$30 \leq t < 60$</td> <td>24</td> <td></td> <td></td> </tr> <tr> <td>$60 \leq t < 90$</td> <td>33</td> <td></td> <td></td> </tr> <tr> <td>$90 \leq t < 120$</td> <td>18</td> <td></td> <td></td> </tr> <tr> <td>$120 \leq t < 150$</td> <td>12</td> <td></td> <td></td> </tr> </table> | Time (seconds) | f | | | $0 \leq t < 30$ | 13 | | | $30 \leq t < 60$ | 24 | | | $60 \leq t < 90$ | 33 | | | $90 \leq t < 120$ | 18 | | | $120 \leq t < 150$ | 12 | | | <p>Find the largest integer value of x that satisfies the inequality $4x - 3 < 2x + 7$</p> |
| Time (seconds) | f | | | | | | | | | | | | | | | | | | | | | | | | | |
| $0 \leq t < 30$ | 13 | | | | | | | | | | | | | | | | | | | | | | | | | |
| $30 \leq t < 60$ | 24 | | | | | | | | | | | | | | | | | | | | | | | | | |
| $60 \leq t < 90$ | 33 | | | | | | | | | | | | | | | | | | | | | | | | | |
| $90 \leq t < 120$ | 18 | | | | | | | | | | | | | | | | | | | | | | | | | |
| $120 \leq t < 150$ | 12 | | | | | | | | | | | | | | | | | | | | | | | | | |