| Name and dimensions <br> of 3-D figures | Diagram of <br> 3- <br> dimensional <br> figure | Volume | Change in <br> dimensions | New <br> volume | Percent of <br> change in <br> volume |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Cylinder <br> d $=12 \mathrm{~cm}$ <br> $\mathrm{~h}=10 \mathrm{~cm}$ | Draw the 3- <br> D figure on <br> the graph <br> paper |  | $\mathrm{d}=14 \mathrm{~cm}$ |  |  |
| Rectangular prism <br> l=10 cm <br> w $=6 \mathrm{~cm}$ <br> h=14 cm | Draw the 3- <br> D figure on <br> the graph <br> paper |  | $\mathrm{h}=28 \mathrm{~cm}$ |  |  |
| Triangular prism <br> Triangular base: <br> $\mathrm{b}=9 \mathrm{~cm}$ <br> $\mathrm{~h}=12 \mathrm{~cm}$ <br> Sides of prism: <br> $\mathrm{h}=20 \mathrm{~cm}$ | Draw the 3- <br> D figure on <br> the graph <br> paper |  | $\mathrm{b}=11 \mathrm{~cm}$ <br> $\mathrm{~h}=14 \mathrm{~cm}$ |  |  |

Answer key

| Name and <br> dimensions of <br> 3-D figures | Diagram of <br> 3- <br> dimensional <br> figure | Volume | Change in <br> dimensions | New <br> Volume | Percent of <br> change in <br> volume |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Cylinder <br> d $=12 \mathrm{~cm}$ <br> $\mathrm{~h}=10 \mathrm{~cm}$ | Draw the 3- <br> D figure on <br> the graph <br> paper | $\mathrm{V}=\mathrm{Bh}$ <br> $360 \Pi \mathrm{~cm}^{3}$ | $\mathrm{~d}=14 \mathrm{~cm}$ | $490 \Pi \mathrm{~cm}^{3}$ | $36 \%$ <br> increase |
| Rectangular <br> prism <br> l=10 cm <br> $\mathrm{w}=6 \mathrm{~cm}$ <br> $\mathrm{~h}=14 \mathrm{~cm}$ | Draw the 3- <br> D figure on <br> the graph <br> paper | $\mathrm{V}=\mathrm{Bh}$ <br> $840 \mathrm{~cm}^{3}$ | $\mathrm{~h}=28 \mathrm{~cm}$ | $1680 \mathrm{~cm}^{3}$ | $100 \%$ <br> increase |
| Triangular <br> prism | Draw the 3- <br> D figure on <br> the graph <br> paper | $\mathrm{V}=\mathrm{Bh}$ <br> $1080 \mathrm{~cm}^{3}$ | $\mathrm{b}=11 \mathrm{~cm}$ <br> $\mathrm{~h}=14 \mathrm{~cm}$ | $1540 \mathrm{~cm}^{3}$ | $42.6 \%$ <br> Triangular base: <br> $\mathrm{b}=9 \mathrm{~cm}$ <br> $\mathrm{~h}=12 \mathrm{~cm}$ <br> Sides of prism: <br> $\mathrm{h}=20 \mathrm{~cm}$ |

## Original cylinder



Diagrams are not to scale

## Dilated cylinder



## Original rectangular prism



Diagrams are not to scale

## Dilated rectangular prism



Diagrams are not to scale

## Original triangular prism



Diagrams are not to scale

## Dilated triangular prism



Diagrams are not to scale

