Math Sheet

Name _____ Score _____ Teacher _____ Date _____

Similar Solids

Decide whether each pair is similar or sketch the stated scaled solid. Compare every labelled corresponding length. Rectangular prisms are right, cylinders and cones are right circular solids, and each square-pyramid apex is directly above the base center. Diagrams are not to scale.

1. **Sketch a cone similar to the pictured solid with scale factor 3/2. Label every corresponding dimension. Scale factor: 3/2.**

radius = 54

perpendicular height = 72

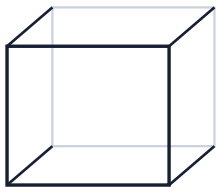
Scaled sketch

2. **Are the two pictured solids similar? Justify using every labelled pair of corresponding lengths.**

length = 48

width = 36

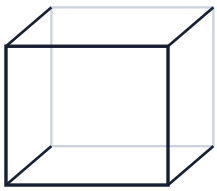
height = 24



length = 144

width = 108

height = 72



Similar? _____

Name _____ Score _____ Teacher _____ Date _____

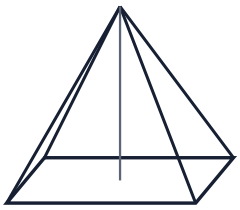
Similar Solids

Decide whether each pair is similar or sketch the stated scaled solid. Compare every labelled corresponding length. Rectangular prisms are right, cylinders and cones are right circular solids, and each square-pyramid apex is directly above the base center. Diagrams are not to scale.

3. **Are the two pictured solids similar? Justify using every labelled pair of corresponding lengths.**

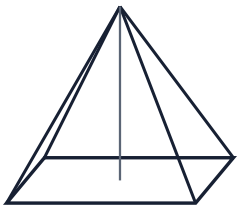
base side = 24

perpendicular height = 18



base side = 16

perpendicular height = 13

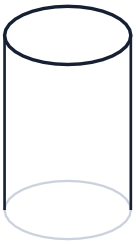


Similar? _____

4. **Sketch a cylinder similar to the pictured solid with scale factor 2/3. Label every corresponding dimension. Scale factor: 2/3.**

radius = 12

height = 30



Scaled sketch

Name _____ Score _____ Teacher _____ Date _____

Similar Solids

Decide whether each pair is similar or sketch the stated scaled solid. Compare every labelled corresponding length. Rectangular prisms are right, cylinders and cones are right circular solids, and each square-pyramid apex is directly above the base center. Diagrams are not to scale.

5. **Sketch a cone similar to the pictured solid with scale factor 2/3. Label every corresponding dimension. Scale factor: 2/3.**

radius = 36

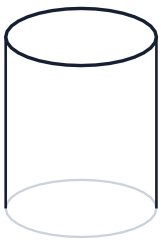
perpendicular height = 48

Scaled sketch

6. **Are the two pictured solids similar? Justify using every labelled pair of corresponding lengths.**

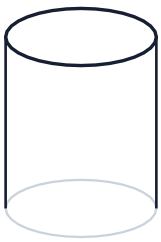
radius = 24

height = 60



radius = 16

height = 40



Similar? _____

Math Sheet

Name _____ Score _____ Teacher _____ Date _____

Similar Solids

Answer Key and Example Sketches

Decide whether each pair is similar or sketch the stated scaled solid. Compare every labelled corresponding length. Rectangular prisms are right, cylinders and cones are right circular solids, and each square-pyramid apex is directly above the base center. Diagrams are not to scale.

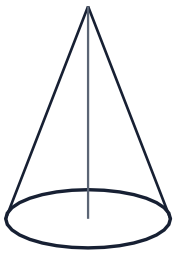
1. **Sketch a cone similar to the pictured solid with scale factor 3/2. Label every corresponding dimension. Scale factor: 3/2.**

radius = 54

perpendicular height = 72

radius = 81

perpendicular height = 108



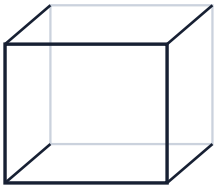
Multiply every labelled linear dimension by 3/2.

2. **Are the two pictured solids similar? Justify using every labelled pair of corresponding lengths.**

length = 48

width = 36

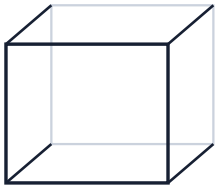
height = 24



length = 144

width = 108

height = 72



Similar. Ratios: 3, 3, 3. Yes. Every second-to-first ratio is 3.

Name _____ Score _____ Teacher _____ Date _____

Similar Solids

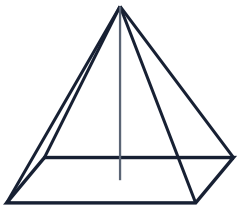
Answer Key and Example Sketches

Decide whether each pair is similar or sketch the stated scaled solid. Compare every labelled corresponding length. Rectangular prisms are right, cylinders and cones are right circular solids, and each square-pyramid apex is directly above the base center. Diagrams are not to scale.

3. **Are the two pictured solids similar? Justify using every labelled pair of corresponding lengths.**

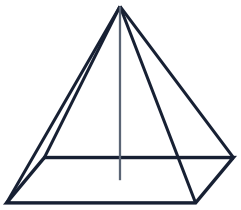
base side = 24

perpendicular height = 18



base side = 16

perpendicular height = 13

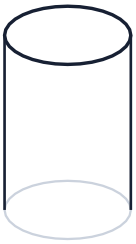


Not similar. Ratios: 2/3, 13/18. No. The corresponding ratios 2/3, 13/18 are not all equal.

4. **Sketch a cylinder similar to the pictured solid with scale factor 2/3. Label every corresponding dimension. Scale factor: 2/3.**

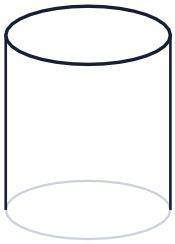
radius = 12

height = 30



radius = 8

height = 20



Multiply every labelled linear dimension by 2/3.

Name _____ Score _____ Teacher _____ Date _____

Similar Solids

Answer Key and Example Sketches

Decide whether each pair is similar or sketch the stated scaled solid. Compare every labelled corresponding length. Rectangular prisms are right, cylinders and cones are right circular solids, and each square-pyramid apex is directly above the base center. Diagrams are not to scale.

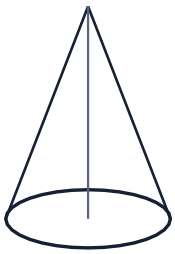
5. **Sketch a cone similar to the pictured solid with scale factor 2/3. Label every corresponding dimension. Scale factor: 2/3.**

radius = 36

perpendicular height = 48

radius = 24

perpendicular height = 32

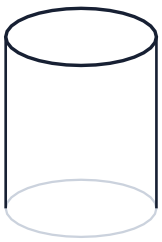


Multiply every labelled linear dimension by 2/3.

6. **Are the two pictured solids similar? Justify using every labelled pair of corresponding lengths.**

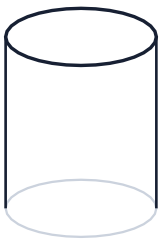
radius = 24

height = 60



radius = 16

height = 40



Similar. Ratios: 2/3, 2/3. Yes. Every second-to-first ratio is 2/3.