



Mechanical Advantage COLORING PAGE

Name _____ Date _____

Mechanical Advantage Coloring Page

For each question, there is one correct answer and a color associated with that answer. On the coloring page, each question number section should be filled in with that color!

1 The force that is applied to a machine to do work is known as the _____

| | | |
|--------------|-------------|-----------|
| output force | input force | advantage |
| LIGHT BLUE | ORANGE | PINK |

2 Swinging a hockey stick with a force of 10 N applies a 5 N force on the puck. What is the mechanical advantage of the hockey stick?

| | | |
|--------|-------------|------|
| 50 | 2 | 0.5 |
| PURPLE | LIGHT GREEN | PINK |

3 What is the mechanical advantage of a steering wheel with a radius of 21 cm on a steering column with a radius of 3 cm?

| | | |
|-------|------|-------------|
| 0.14 | 7 cm | 7 |
| BLACK | RED | LIGHT GREEN |

4 How much force did you apply to a screwdriver to pry open a paint can if the mechanical advantage is 10 and the screwdriver applied 500 N of force?

| | | |
|--------|-------|------------|
| 0.02 N | 50 N | 5000 N |
| YELLOW | BLACK | LIGHT BLUE |

5 What is the mechanical advantage of a lever in which the input force is 20 cm from the fulcrum and the output force is 120 cm from the fulcrum?

| | | |
|-----------|-------|-------------|
| 6 | 6 N | 2400 |
| DARK BLUE | BLACK | LIGHT GREEN |

6 What is the length of an inclined plane that has a mechanical advantage of 5 m?

| | | |
|------------|--------|-------|
| 12 m | 0.48 m | 2.08 |
| DARK GREEN | PURPLE | BLACK |

7 How do you increase the mechanical advantage of an inclined plane?

| | | |
|---------------------|---------------------|---------------------|
| increase the length | decrease the length | increase the height |
| PURPLE | PINK | LIGHT BLUE |

8 The closer the grooves are on a screw, the higher the mechanical advantage because the threads _____

| | | |
|-----------------------|-----------------------|--------------------------|
| decrease the distance | increase the distance | increase the input force |
| PURPLE | YELLOW | ORANGE |

9 When a machine does work on an object, the output force is always _____ the input force.

| | | |
|-------------|--------------|------------|
| the same as | greater than | less than |
| YELLOW | DARK BLUE | LIGHT BLUE |

10 It takes 50 N of force to raise the flag up the flagpole. The load is 50 N. What is the mechanical advantage?

| | | |
|------------|-----|-------|
| 0 | 1 | 50 |
| LIGHT BLUE | RED | BLACK |

Credits:

Thank you to the following for the creation and use of their digital papers, clip art, and fonts.



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digital toonage



pixel
scrapper



FOLLOW ME:



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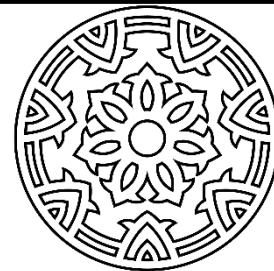
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1
The force that is applied to a machine to do work is known as the

output force
LIGHT BLUE

input force
ORANGE

advantage
PINK

6
What is the length of an inclined plane that has a mechanical advantage of 2.4 and height of 5 m?

12 m
DARK GREEN

0.48 m
PURPLE

2.08 m
BLACK

2
Swinging a hockey stick with a force of 10 N applies a 5 N force on the puck. What is the mechanical advantage of the hockey stick?

50
PURPLE

2
LIGHT GREEN

0.5
PINK

7
How do you increase the mechanical advantage of an inclined plane?

increase the length
PURPLE

decrease the length
PINK

increase the height
LIGHT BLUE

3
What is the mechanical advantage of a steering wheel with a radius of 21 cm on a steering column with a radius of 3 cm?

0.14
BLACK

7 cm
RED

7
LIGHT GREEN

8
The closer the grooves are on a screw, the higher the mechanical advantage because the threads

decrease the distance
PURPLE

increase the distance
YELLOW

increase the input force
ORANGE

4
How much force did you apply to a screwdriver to pry open a paint can if the mechanical advantage is 10 and the screwdriver applied 500 N of force?

0.02 N
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DARK BLUE

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LIGHT BLUE

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What is the mechanical advantage of a lever in which the input force is 20 cm from the fulcrum and the output force is 120 cm from the fulcrum?

6
DARK BLUE

6 N
BLACK

2400
LIGHT GREEN

10
It takes 50 N of force to raise the flag up the flagpole. The load is 50 N. What is the mechanical advantage?

0
LIGHT BLUE

1
RED

50
DARK GREEN

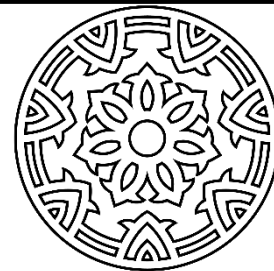
Name _____

Teacher Key

Date _____

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LIGHT BLUE

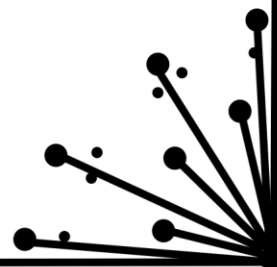
1
RED

50
DARK GREEN



Color each numbered section (corresponds with the question number) with the color of the correct answer.

Any sections that are not numbered, you may color with your choice!





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