

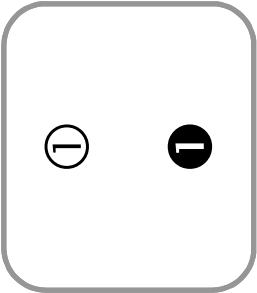
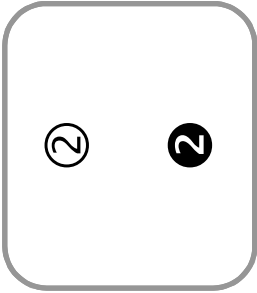
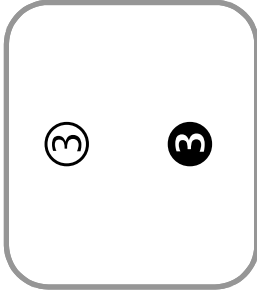
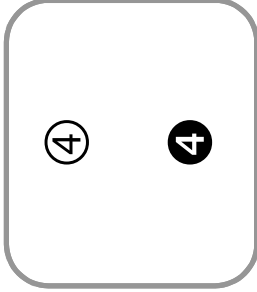
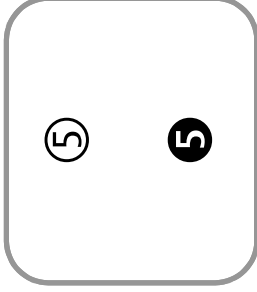
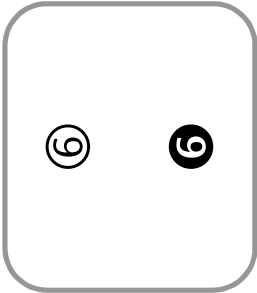
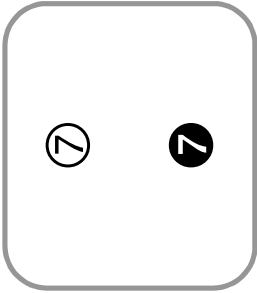
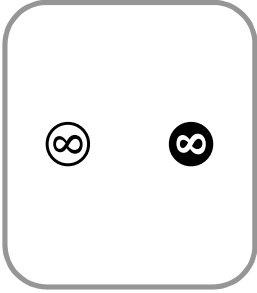
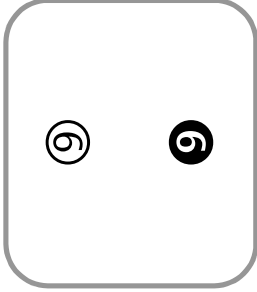
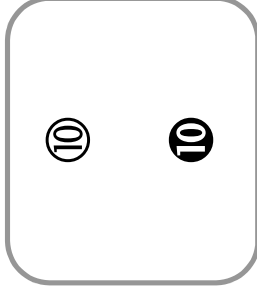
How To Use These Flashcards:

Use either the picture or the strategy to figure out the multiplication fact.

If you have to double something like 16, use partial sums by saying that 10 doubled is 20 and 6 doubled is 12.

So the total is 32 because $20 + 12$ is simply $20 + 10 + 2$.

(Note: Other possible strategies for these facts exist, but these flashcards are intended for use in developing meaning and fluency with one particular strategy at a time.)

| | | | | |
|---|---|--|---|---|
| $\begin{array}{r} 2 \\ \times 1 \\ \hline \end{array}$  <p>Strategy: 1 Doubled</p> <p>2</p> | $\begin{array}{r} 2 \\ \times 2 \\ \hline \end{array}$  <p>Strategy: 2 Doubled</p> <p>4</p> | $\begin{array}{r} 2 \\ \times 3 \\ \hline \end{array}$  <p>Strategy: 3 Doubled</p> <p>6</p> | $\begin{array}{r} 2 \\ \times 4 \\ \hline \end{array}$  <p>Strategy: 4 Doubled</p> <p>8</p> | $\begin{array}{r} 2 \\ \times 5 \\ \hline \end{array}$  <p>Strategy: 5 Doubled</p> <p>10</p> |
| $\begin{array}{r} 2 \\ \times 6 \\ \hline \end{array}$  <p>Strategy: 6 Doubled</p> <p>12</p> | $\begin{array}{r} 2 \\ \times 7 \\ \hline \end{array}$  <p>Strategy: 7 Doubled</p> <p>14</p> | $\begin{array}{r} 2 \\ \times 8 \\ \hline \end{array}$  <p>Strategy: 8 Doubled</p> <p>16</p> | $\begin{array}{r} 2 \\ \times 9 \\ \hline \end{array}$  <p>Strategy: 9 Doubled</p> <p>18</p> | $\begin{array}{r} 2 \\ \times 10 \\ \hline \end{array}$  <p>Strategy: 10 Doubled</p> <p>20</p> |

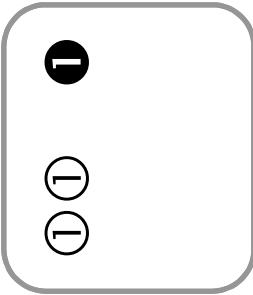
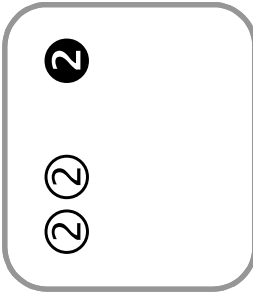
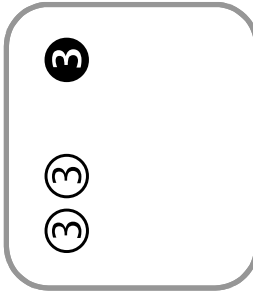
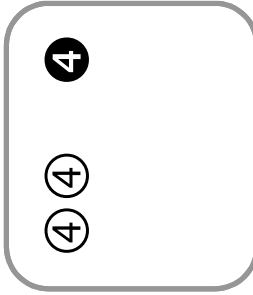
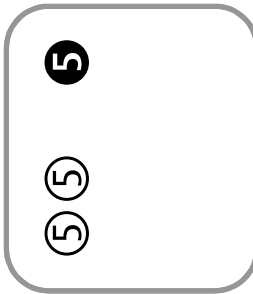
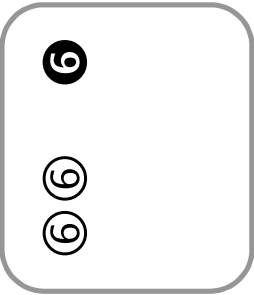
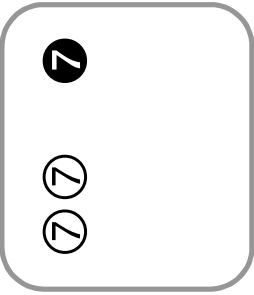
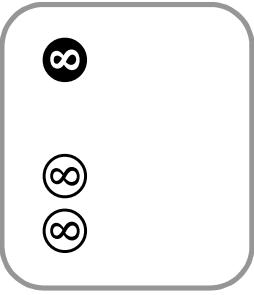
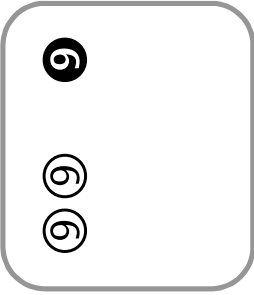
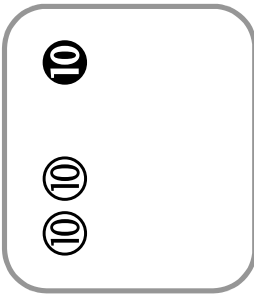
How To Use These Flashcards:

Use either the picture or the strategy to figure out the multiplication fact.

We are using the power of doubles for this strategy.

To multiply by 3, we are doubling then adding the extra group.

(Note: Other possible strategies for these facts exist, but these flashcards are intended for use in developing meaning and fluency with one particular strategy at a time.)

| | | | | |
|---|---|--|---|--|
| $\begin{array}{r} 3 \\ \times 1 \\ \hline \end{array}$  <p>Strategy: 1 Doubled + 1</p> <p>3</p> | $\begin{array}{r} 3 \\ \times 2 \\ \hline \end{array}$  <p>Strategy: 2 Doubled + 2</p> <p>6</p> | $\begin{array}{r} 3 \\ \times 3 \\ \hline \end{array}$  <p>Strategy: 3 Doubled + 3</p> <p>9</p> | $\begin{array}{r} 3 \\ \times 4 \\ \hline \end{array}$  <p>Strategy: 4 Doubled + 4</p> <p>12</p> | $\begin{array}{r} 3 \\ \times 5 \\ \hline \end{array}$  <p>Strategy: 5 Doubled + 5</p> <p>15</p> |
| $\begin{array}{r} 3 \\ \times 6 \\ \hline \end{array}$  <p>Strategy: 6 Doubled + 6</p> <p>18</p> | $\begin{array}{r} 3 \\ \times 7 \\ \hline \end{array}$  <p>Strategy: 7 Doubled + 7</p> <p>21</p> | $\begin{array}{r} 3 \\ \times 8 \\ \hline \end{array}$  <p>Strategy: 8 Doubled + 8</p> <p>24</p> | $\begin{array}{r} 3 \\ \times 9 \\ \hline \end{array}$  <p>Strategy: 9 Doubled + 9</p> <p>27</p> | $\begin{array}{r} 3 \\ \times 10 \\ \hline \end{array}$  <p>Strategy: 10 Doubled + 10</p> <p>30</p> |

How To Use These Flashcards:

Use either the picture or the strategy to figure out the multiplication fact.

If you have to double something like 16, use partial sums by saying that 10 doubled is 20 and 6 doubled is 12.

So the total is 32 because $20 + 12$ is simply $20 + 10 + 2$.

(Note: Other possible strategies for these facts exist, but these flashcards are intended for use in developing meaning and fluency with one particular strategy at a time.)

| | | | | |
|---|---|---|---|---|
| $\begin{array}{r} 4 \\ \times 1 \\ \hline \end{array}$ <p>Strategy: 2x1 then double</p> <p>4</p> | $\begin{array}{r} 4 \\ \times 2 \\ \hline \end{array}$ <p>Strategy: 2x2 then double</p> <p>8</p> | $\begin{array}{r} 4 \\ \times 3 \\ \hline \end{array}$ <p>Strategy: 2x3 then double</p> <p>12</p> | $\begin{array}{r} 4 \\ \times 4 \\ \hline \end{array}$ <p>Strategy: 2x4 then double</p> <p>16</p> | $\begin{array}{r} 4 \\ \times 5 \\ \hline \end{array}$ <p>Strategy: 2x5 then double</p> <p>20</p> |
| $\begin{array}{r} 4 \\ \times 6 \\ \hline \end{array}$ <p>Strategy: 2x6 then double</p> <p>24</p> | $\begin{array}{r} 4 \\ \times 7 \\ \hline \end{array}$ <p>Strategy: 2x7 then double</p> <p>28</p> | $\begin{array}{r} 4 \\ \times 8 \\ \hline \end{array}$ <p>Strategy: 2x8 then double</p> <p>32</p> | $\begin{array}{r} 4 \\ \times 9 \\ \hline \end{array}$ <p>Strategy: 2x9 then double</p> <p>36</p> | $\begin{array}{r} 4 \\ \times 10 \\ \hline \end{array}$ <p>Strategy: 2x10 then double</p> <p>40</p> |

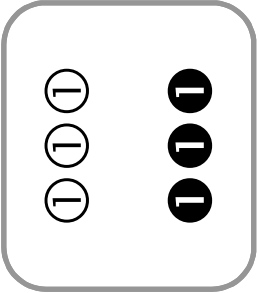
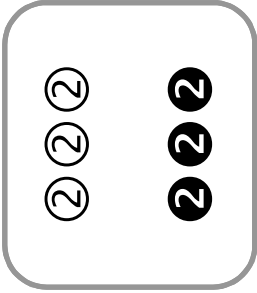
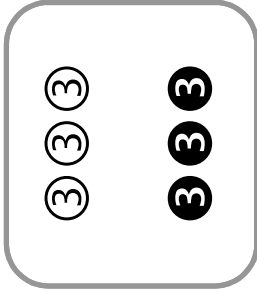
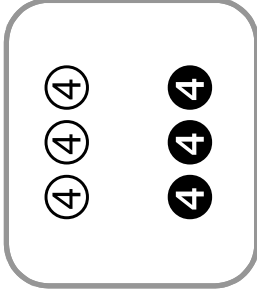
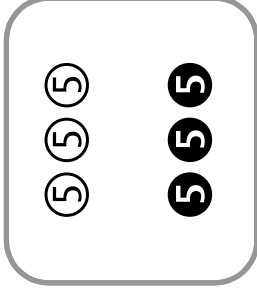
How To Use These Flashcards:

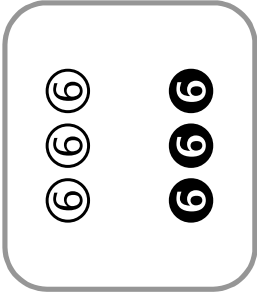
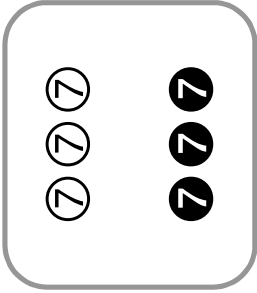
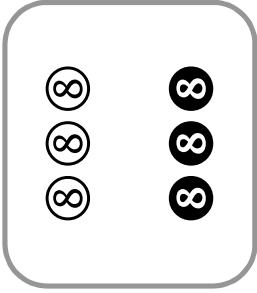
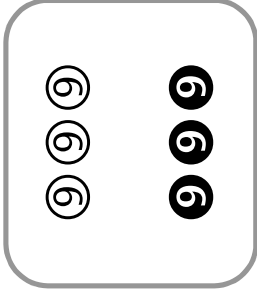
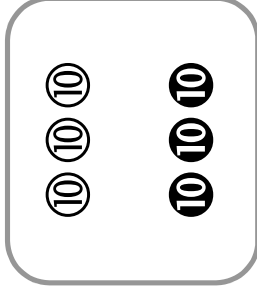
Use either the picture or the strategy to figure out the multiplication fact.

If you have to double something like 27, use partial sums by saying that 20 doubled is 40 and 7 doubled is 14.

So the total is 54, because $40 + 14$ is simply $40+10+4$.

(Note: Other possible strategies for these facts exist, but these flashcards are intended for use in developing meaning and fluency with one particular strategy at a time.)

| | | | | |
|--|---|--|---|---|
| $\begin{array}{r} 6 \\ \times 1 \\ \hline \end{array}$  <p>Strategy: 3x1 then double</p> <p>6</p> | $\begin{array}{r} 6 \\ \times 2 \\ \hline \end{array}$  <p>Strategy: 3x2 then double</p> <p>12</p> | $\begin{array}{r} 6 \\ \times 3 \\ \hline \end{array}$  <p>Strategy: 3x3 then double</p> <p>18</p> | $\begin{array}{r} 6 \\ \times 4 \\ \hline \end{array}$  <p>Strategy: 3x4 then double</p> <p>24</p> | $\begin{array}{r} 6 \\ \times 5 \\ \hline \end{array}$  <p>Strategy: 3x5 then double</p> <p>30</p> |
|--|---|--|---|---|

| | | | | |
|---|---|--|---|---|
| $\begin{array}{r} 6 \\ \times 6 \\ \hline \end{array}$  <p>Strategy: 3x6 then double</p> <p>36</p> | $\begin{array}{r} 6 \\ \times 7 \\ \hline \end{array}$  <p>Strategy: 3x7 then double</p> <p>42</p> | $\begin{array}{r} 6 \\ \times 8 \\ \hline \end{array}$  <p>Strategy: 3x8 then double</p> <p>48</p> | $\begin{array}{r} 6 \\ \times 9 \\ \hline \end{array}$  <p>Strategy: 3x9 then double</p> <p>54</p> | $\begin{array}{r} 6 \\ \times 10 \\ \hline \end{array}$  <p>Strategy: 3x10 then double</p> <p>60</p> |
|---|---|--|---|---|

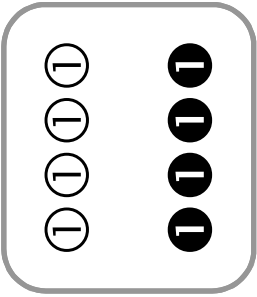
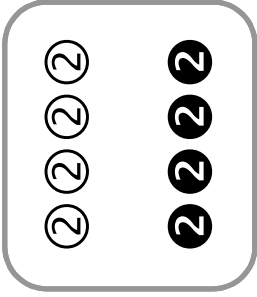
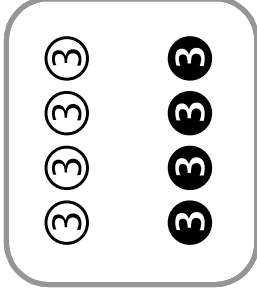
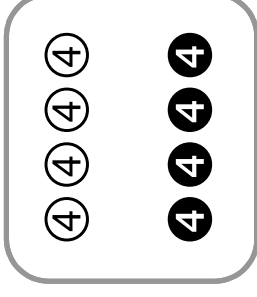
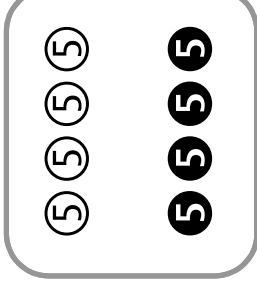
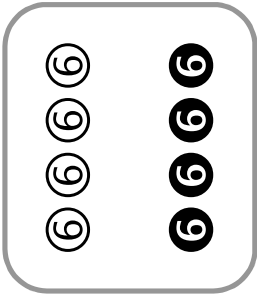
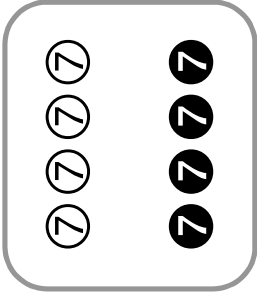
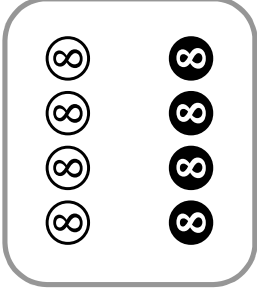
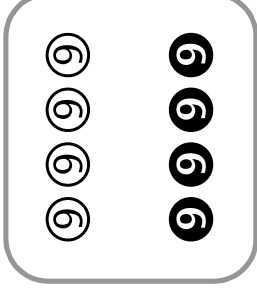
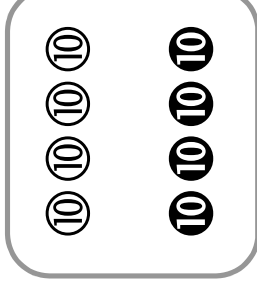
How To Use These Flashcards:

Use either the picture or the strategy to figure out the multiplication fact.

If you have to double something like 28, use partial sums by saying that 20 doubled is 40 and 8 doubled is 16.

So the total is 56 because $40 + 16$ is simply $40 + 10 + 6$.

(Note: Other possible strategies for these facts exist, but these flashcards are intended for use in developing meaning and fluency with one particular strategy at a time.)

| | | | | |
|---|---|--|---|---|
| $\begin{array}{r} 8 \\ \times 1 \\ \hline \end{array}$  <p>Strategy: 4x1 then double</p> <p>8</p> | $\begin{array}{r} 8 \\ \times 2 \\ \hline \end{array}$  <p>Strategy: 4x2 then double</p> <p>16</p> | $\begin{array}{r} 8 \\ \times 3 \\ \hline \end{array}$  <p>Strategy: 4x3 then double</p> <p>24</p> | $\begin{array}{r} 8 \\ \times 4 \\ \hline \end{array}$  <p>Strategy: 4x4 then double</p> <p>32</p> | $\begin{array}{r} 8 \\ \times 5 \\ \hline \end{array}$  <p>Strategy: 4x5 then double</p> <p>40</p> |
| $\begin{array}{r} 8 \\ \times 6 \\ \hline \end{array}$  <p>Strategy: 4x6 then double</p> <p>48</p> | $\begin{array}{r} 8 \\ \times 7 \\ \hline \end{array}$  <p>Strategy: 4x7 then double</p> <p>56</p> | $\begin{array}{r} 8 \\ \times 8 \\ \hline \end{array}$  <p>Strategy: 4x8 then double</p> <p>64</p> | $\begin{array}{r} 8 \\ \times 9 \\ \hline \end{array}$  <p>Strategy: 4x9 then double</p> <p>72</p> | $\begin{array}{r} 8 \\ \times 10 \\ \hline \end{array}$  <p>Strategy: 4x10 then double</p> <p>80</p> |

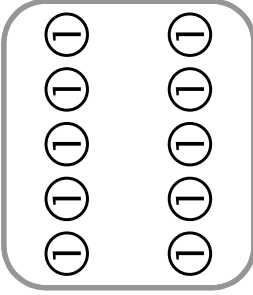
How To Use These Flashcards:

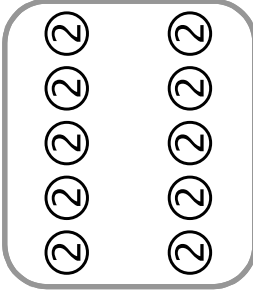
Use either the picture or the strategy to figure out the multiplication fact.

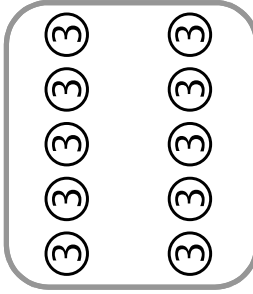
For this strategy, we think of groups of 10 as long blocks, with no cubes.

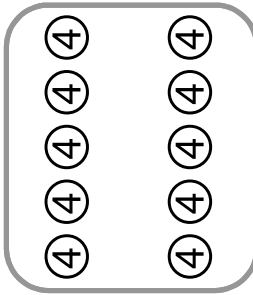
So to multiply by 10 we just put a zero at the end, which really becomes the ones column.

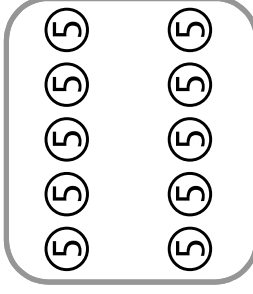
(Note: Other possible strategies for these facts exist, but these flashcards are intended for use in developing meaning and fluency with one particular strategy at a time.)

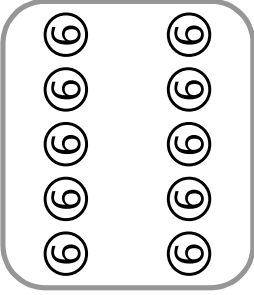
| | | | |
|---------------|---|-----------------------------|----|
| 10×1 |  | Strategy: 1 followed by a 0 | 10 |
|---------------|---|-----------------------------|----|

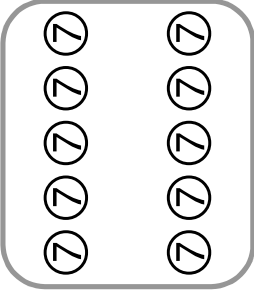
| | | | |
|---------------|---|-----------------------------|----|
| 10×2 |  | Strategy: 2 followed by a 0 | 20 |
|---------------|---|-----------------------------|----|

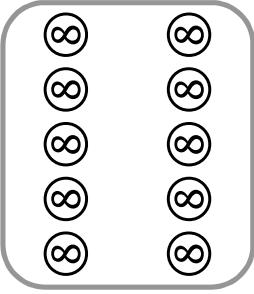
| | | | |
|---------------|--|-----------------------------|----|
| 10×3 |  | Strategy: 3 followed by a 0 | 30 |
|---------------|--|-----------------------------|----|

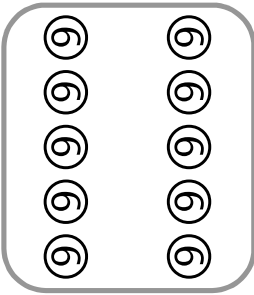
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| 10×4 |  | Strategy: 4 followed by a 0 | 40 |
|---------------|---|-----------------------------|----|

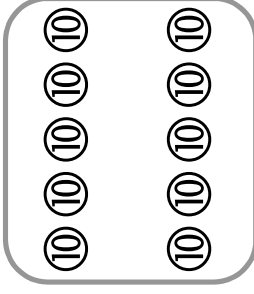
| | | | |
|---------------|---|-----------------------------|----|
| 10×5 |  | Strategy: 5 followed by a 0 | 50 |
|---------------|---|-----------------------------|----|

| | | | |
|---------------|---|-----------------------------|----|
| 10×6 |  | Strategy: 6 followed by a 0 | 60 |
|---------------|---|-----------------------------|----|

| | | | |
|---------------|---|-----------------------------|----|
| 10×7 |  | Strategy: 7 followed by a 0 | 70 |
|---------------|---|-----------------------------|----|

| | | | |
|---------------|--|-----------------------------|----|
| 10×8 |  | Strategy: 8 followed by a 0 | 80 |
|---------------|--|-----------------------------|----|

| | | | |
|---------------|---|-----------------------------|----|
| 10×9 |  | Strategy: 9 followed by a 0 | 90 |
|---------------|---|-----------------------------|----|

| | | | |
|----------------|---|-----------------------------|-----|
| 10×10 |  | Strategy: 1 followed by a 0 | 100 |
|----------------|---|-----------------------------|-----|

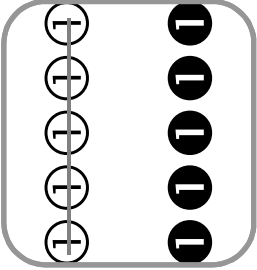
How To Use These Flashcards:

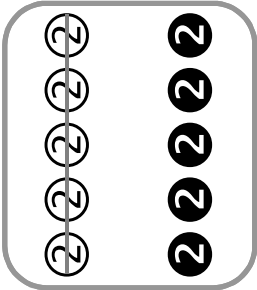
Use either the picture or the strategy to figure out the multiplication fact.

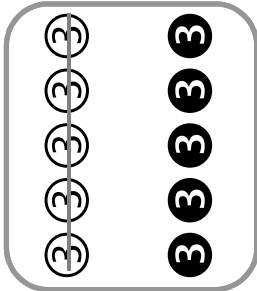
Thinking of 5 as half of 10 gives students number sense and creates relationships among numbers.

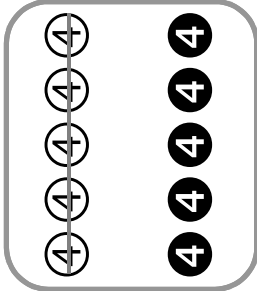
If students learn that x5 is half of x10, then they can relate x50 as half of x100 and even x500 as half of 1,000.

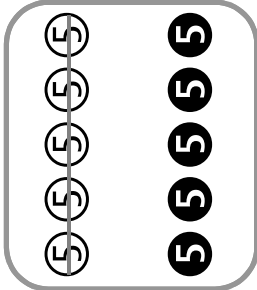
(Note: Other possible strategies for these facts exist, but these flashcards are intended for use in developing meaning and fluency with one particular strategy at a time.)

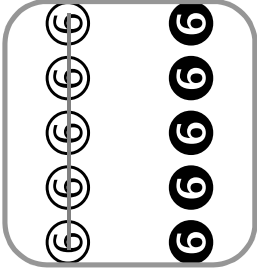
| | |
|---|---|
| 5 $\times 1$  Strategy: 10x1 Cut in half | 5 |
|---|---|

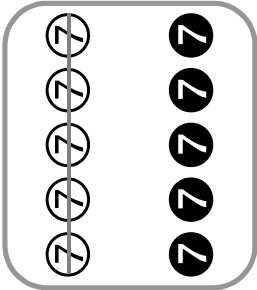
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|---|----|
| 5 $\times 2$  Strategy: 10x2 Cut in half | 10 |
|---|----|

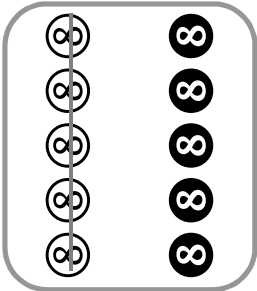
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|--|----|
| 5 $\times 3$  Strategy: 10x3 Cut in half (Hint: Think about time) | 15 |
|--|----|

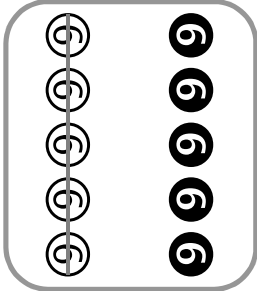
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|---|----|
| 5 $\times 4$  Strategy: 10x4 Cut in half | 20 |
|---|----|

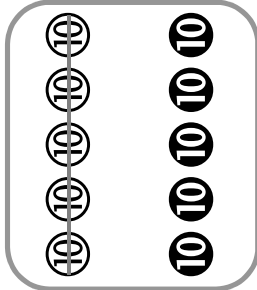
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|--|----|
| 5 $\times 5$  Strategy: 10x5 Cut in half (Hint: Think about money) | 25 |
|--|----|

| | |
|---|----|
| 5 $\times 6$  Strategy: 10x6 Cut in half | 30 |
|---|----|

| | |
|---|----|
| 5 $\times 7$  Strategy: 10x7 Cut in half (Hint: 70 is 60+10, cut both in half & add pieces) | 35 |
|---|----|

| | |
|--|----|
| 5 $\times 8$  Strategy: 10x8 Cut in half | 40 |
|--|----|

| | |
|---|----|
| 5 $\times 9$  Strategy: 10x9 Cut in half (Hint: 90 is 80+10, cut both in half & add pieces) | 45 |
|---|----|

| | |
|---|----|
| 5 $\times 10$  Strategy: 10x10 Cut in half | 50 |
|---|----|

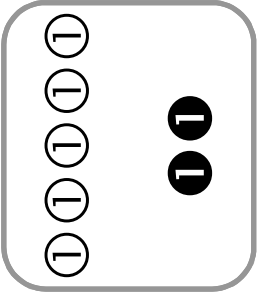
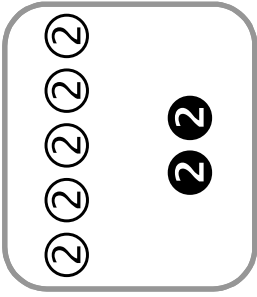
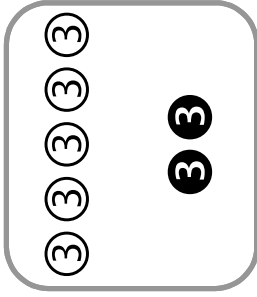
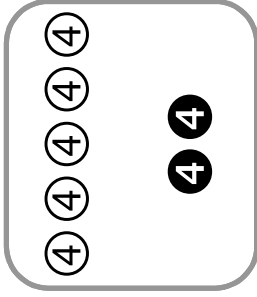
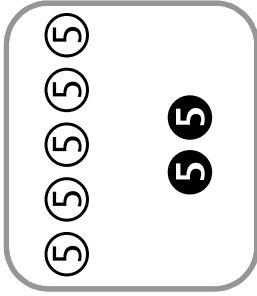
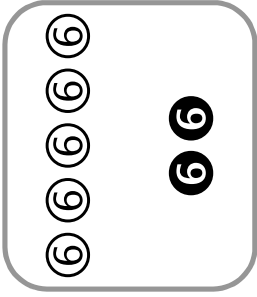
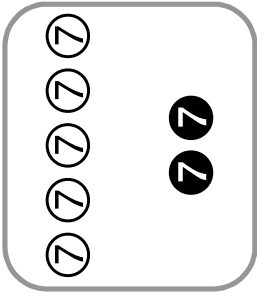
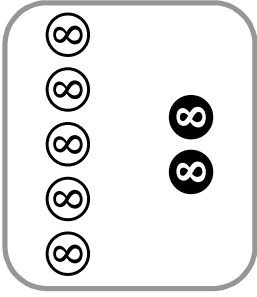
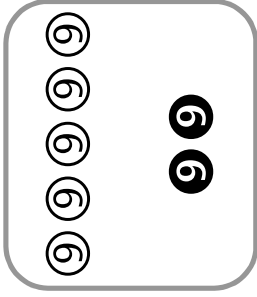
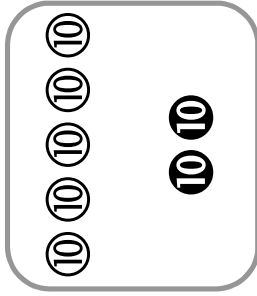
How To Use These Flashcards:

Use either the picture or the strategy to figure out the multiplication fact.

If you have to add something like $45 + 18$, use partial sums by saying that $40 + 10$ is 50 and $5 + 8$ is 13.

So the total is 63 because $50 + 13$ is simply $50 + 10 + 3$.

(Note: Other possible strategies for these facts exist, but these flashcards are intended for use in developing meaning and fluency with one particular strategy at a time.)

| | | | | |
|---|---|--|---|--|
| $\begin{array}{r} 7 \\ \times 1 \\ \hline \end{array}$  <p>Strategy: $(5 \times 1) + (2 \times 1)$</p> <p style="text-align: right;">7</p> | $\begin{array}{r} 7 \\ \times 2 \\ \hline \end{array}$  <p>Strategy: $(5 \times 2) + (2 \times 2)$</p> <p style="text-align: right;">14</p> | $\begin{array}{r} 7 \\ \times 3 \\ \hline \end{array}$  <p>Strategy: $(5 \times 3) + (2 \times 3)$</p> <p style="text-align: right;">21</p> | $\begin{array}{r} 7 \\ \times 4 \\ \hline \end{array}$  <p>Strategy: $(5 \times 4) + (2 \times 4)$</p> <p style="text-align: right;">28</p> | $\begin{array}{r} 7 \\ \times 5 \\ \hline \end{array}$  <p>Strategy: $(5 \times 5) + (2 \times 5)$</p> <p style="text-align: right;">35</p> |
| $\begin{array}{r} 7 \\ \times 6 \\ \hline \end{array}$  <p>Strategy: $(5 \times 6) + (2 \times 6)$</p> <p style="text-align: right;">42</p> | $\begin{array}{r} 7 \\ \times 7 \\ \hline \end{array}$  <p>Strategy: $(5 \times 7) + (2 \times 7)$</p> <p style="text-align: right;">49</p> | $\begin{array}{r} 7 \\ \times 8 \\ \hline \end{array}$  <p>Strategy: $(5 \times 8) + (2 \times 8)$</p> <p style="text-align: right;">56</p> | $\begin{array}{r} 7 \\ \times 9 \\ \hline \end{array}$  <p>Strategy: $(5 \times 9) + (2 \times 9)$</p> <p style="text-align: right;">63</p> | $\begin{array}{r} 7 \\ \times 10 \\ \hline \end{array}$  <p>Strategy: $(5 \times 10) + (2 \times 10)$</p> <p style="text-align: right;">70</p> |

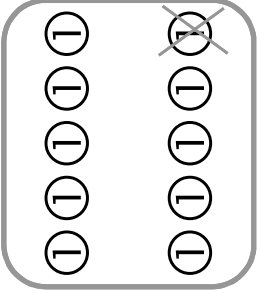
How To Use These Flashcards:

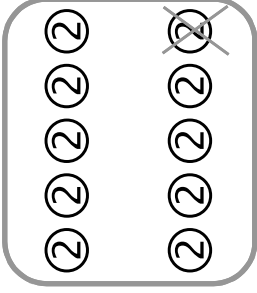
Use either the picture or the strategy to figure out the multiplication fact.

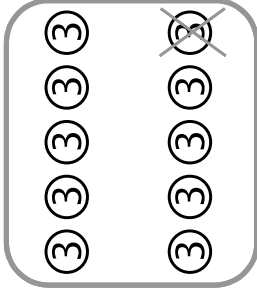
For this strategy, we think of 9 as just 1 group less than 10.

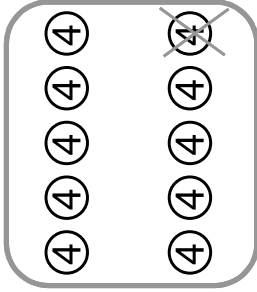
We start by multiplying by 10 (because it is easy) and then just remove 1 group. Example: 8×9 is 8×10 (80) minus a group of 8 (80-8) which is 72.

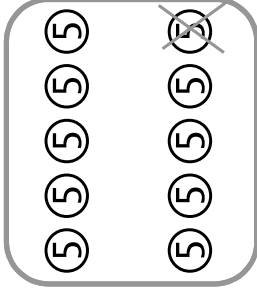
(Note: Other possible strategies for these facts exist, but these flashcards are intended for use in developing meaning and fluency with one particular strategy at a time.)

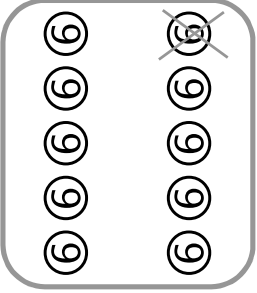
| | |
|---|---|
| 9 $\times 1$  Strategy: $(10 \times 1) - (1 \text{ group of } 1)$ | 9 |
|---|---|

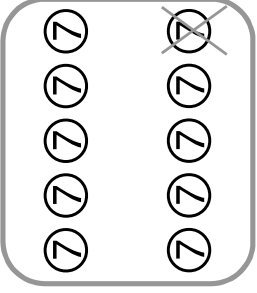
| | |
|---|----|
| 9 $\times 2$  Strategy: $(10 \times 2) - (1 \text{ group of } 2)$ | 18 |
|---|----|

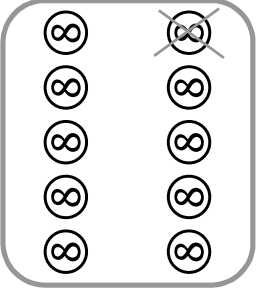
| | |
|--|----|
| 9 $\times 3$  Strategy: $(10 \times 3) - (1 \text{ group of } 3)$ | 27 |
|--|----|

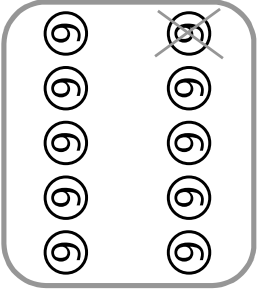
| | |
|---|----|
| 9 $\times 4$  Strategy: $(10 \times 4) - (1 \text{ group of } 4)$ | 36 |
|---|----|

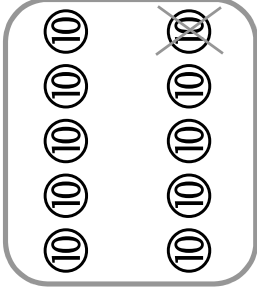
| | |
|---|----|
| 9 $\times 5$  Strategy: $(10 \times 5) - (1 \text{ group of } 5)$ | 45 |
|---|----|

| | |
|---|----|
| 9 $\times 6$  Strategy: $(10 \times 6) - (1 \text{ group of } 6)$ | 54 |
|---|----|

| | |
|---|----|
| 9 $\times 7$  Strategy: $(10 \times 7) - (1 \text{ group of } 7)$ | 63 |
|---|----|

| | |
|--|----|
| 9 $\times 8$  Strategy: $(10 \times 8) - (1 \text{ group of } 8)$ | 72 |
|--|----|

| | |
|---|----|
| 9 $\times 9$  Strategy: $(10 \times 9) - (1 \text{ group of } 9)$ | 81 |
|---|----|

| | |
|--|----|
| 9 $\times 10$  Strategy: $(10 \times 10) - (1 \text{ group of } 10)$ | 90 |
|--|----|